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DRAWING AND INDUSTRIAL ART

1919
REPORT OF PROGRESS
DULUTH PUBLIC SCHOOLS

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DRAWING AND INDUSTRIAL ART

1919

REPORT OF PROGRESS

DULUTH PUBLIC SCHOOLS

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PREFACE.

This pamphlet on Drawing and Industrial Art is one of a series of five which constitutes the Course of Study so far available in printed form for use in the Public Schools of the City of Duluth. The other pamphlets are as follows: one on Arithmetic; one on Music and Physical Education; one on Nature Study, Geography, and History; one on English, including Reading, Phonics, Spelling, Penmanship, Language, Composition, Grammar and Literature.

This Course of Study was constructed during the school term of 1918-19 and during the summer of 1919. It was introduced in September, 1919. It is the product of the combined effort of the teachers, principals, and supervisors in the Public Schools and the State Normal School of Duluth.

The general supervision of the entire course was under an executive committee consisting of a principal, a supervisor, and a superintendent of the training department of a normal school. Each subject was in charge of a special committee consisting of teachers, principals and supervisors, with the teachers largely predominating. While the number of teachers on these committees was made as large as possible in order to secure the benefit of class room experience, not all were able to participate in the work on account of the lack of time and facilities for reaching them. Much credit is due all who have so willingly and efficiently assisted in bringing this course of study to its present standard. The fact that it is an outgrowth of the best class-room practice in the city is due largely, however, to the teachers who helped in its construction.

The general plan for each subject in the Course, the principles for the selection of subject matter, and the organization of subject matter were agreed upon by the executive committee and the chairman of each special committee after much study and careful deliberation. Each special committee observed these principles of selection and plan of organization in preparing the subject assigned. Suggestions on the Course in English were received from a group of business men in order to secure the point of view of those outside the schools. Similar help was received from a group of musicians on the Course in Music.

The general plan adopted for each Course is as follows:

I. Table of Contents.

II. Aims and purposes for all grades.

A statement of the purposes of the subject as a whole.

III. Outline of subject matter.

Brief survey of subject matter throughout the Elementary and Junior High Schools.

IV. General Directions.

V. Detailed outline of subject matter.

VI. General Bibliography.

As a basis for the selection of subject matter for this Course of Study the following social values were used:

I. That subject matter was selected which is most frequently used by the greatest number of people in life situations. The term "use" is not restricted to the mere economic sense but includes all those matters which society has learned to value and desires to pass on to the next generation.

II. That subject matter was selected which is not only most frequently used but is most significant when used, e. g., we teach how to save life from drowning, not because of the number of times it would be used but because of its great significance when used. These methods of choosing subject matter while they have been a guiding principle have been necessarily limited by such considerations as, expense of teaching, time of pupils, ability of teachers and pupils and organization and availability of material.

In the organization of subject matter an attempt has been made to arrange it around projects suited to the abilities and interests of the pupils for whom it is intended and adapted to the successful use of well-recognized methods of teaching and to the needs of the state and community. These projects, according to the nature of the subject matter, lend themselves to one of the following types:

Type 1.

"In which the purpose is to embody some idea or plan in external form, as building a boat, writing a letter, presenting a play.

Type 2.

"In which the purpose is to enjoy some aesthetic experience, as listening to a story, hearing a symphony, appreciating a picture.

Type 3.

"In which the purpose is to straighten out some intellectual difficulty, to solve some problem, as to find out whether or not dew falls, to ascertain how New York outgrew Philadelphia.

Type 4.

"In which the purpose is to obtain some item or degree of skill or knowledge, as learning to write grade 14 on the Thorndike Scale, learning the irregular verbs in French. Some teachers, indeed, may not closely discriminate between drill as a project and drill as a set task, although the results will be markedly different."

"It is at once evident that these groupings more or less overlap and that one type may be used as means to another as end. It may be of interest to note that with these definitions the project method logically includes the problem method as a special case.

The value of such a classification as that here given seems to me to lie in the light it should throw on the kind of projects teachers may expect and on the procedure that normally prevails in the several types.''—Kilpatrick. Teachers' College Record, September, 1918.

This Course of Study is in no sense a finished product. It is a record of past achievement and a standard of present attainment. It is intended also to be a guide post for further progress. As the quality of the classroom instruction improves by means of this course, the course should likewise be improved in the nature of the subject matter and in the effectiveness of the teaching method. For this purpose the suggestions and criticisms of teachers, principals, and supervisors will be requested from time to time.

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DRAWING AND INDUSTRIAL ART.

INTRODUCTION.

To give the child some appreciation of the enduring achievements of the race to which he belongs is the object of the course in Drawing and Industrial Art. Thereby he can better understand the world in which he lives, how modern needs are supplied by the production, manufacture, and distribution of goods, and the value of design, composition and color in economic life.

Because man's intelligence has developed mainly through his efforts to solve the problems of industry, Industrial Education furnishes peculiar opportunities for the mental development of the child. The problems offered furnish a real and vital starting point for the acquisition of information of all kinds. The problems to be solved are practical and concrete and are suited to his intelligence. They give the child a perspective view of the struggles of the race to maintain and to forward itself on the earth. They make plain how people have learned the advantage and importance of social life. The constant opportunities offered for concerted effort in planning and working out group problems expand the group consciousness of the child. It is by observation and by actual participation in the family, in the school, and in the community, that the child learns why people work together to accomplish certain results; how the home helps the school and the school helps the home; and how both help the neighborhood, the town, the city, and the nation. By facing problems that could not be solved alone, both in war and in peace, people have learned the value of co-operation.

The study of a particular industry should be approached from the standpoint of general education, the activities involved being adjusted to the abilities of the various grades. All hand work recommended is based upon the industries studied and is of two kinds: drawing, including representation and design; construction, including the selection, preparation, and manipulation of materials.

As soon as the industry is chosen the class is set to work investigating it and collecting information about it from all available sources. Some of the material will be obtained through actual contact with those engaged in the industry or with those who handle its products. Some facts will have to be obtained from reference books, and much valuable information can be collected by writing to manufacturing firms advertised in magazines and newspapers. Assignments covering such topics as the following should be made:

The value of the industry to man, and how we are affected by it.

The Evolution of the Industry, and its heroes of invention.

Characteristics of the product; what constitutes excellence.

Materials employed, and where they come from.

Classification of processes involved as skilled and unskilled.

Tools used.

Healthfulness of the kinds of work involved.

Hours, wages, and training of the workers.

Part played in the industry by several subjects such as mathematics, chemistry, etc.

Part played by drawing and design.

The industry as depicted in art and references to it in literature.

In brief, man has been primarily concerned with procuring for himself the following:

Food. Life itself depends upon this. The first steps beyond taking it as he finds it, are the use and control of fire, the making of weapons, and the domestication of plants and animals.

Shelter, for protection from the weather and from enemies, animal and human. The use of fire furnishes warmth and scares away animals.

Clothing, for further protection against the cold, heat, and wet, and for bodily decoration.

Utensils in which to gather, hold and carry the things which he finds and makes. Baskets, pottery, and metal ware are illustrations of this.

Weapons, Tools, and Machines with which to obtain and to manufacture what he needs.

Means of Transportation to facilitate the carrying of goods and persons from place to place. The drag pole and wheel and axle are early examples; the automobile and aeroplane more recent.

Group Organization or doing things together, by means of which tasks impossible for the individual are accomplished. Hunting in gangs, using long fish nets, harvesting, and fighting in armies are examples.

Records by which man perpetuates his deeds and his feelings.

Side by side and pervading all these has developed the **Love of Beauty.** Man's growing appreciation of beauty whether in form, in color, in rhythm, in music, or in literature is the indication of this. Art is the expression of man's joy in his work. To learn to express and appreciate beauty in the thousand things of daily life is the right of every child during his school years. This seldom comes without definite training,

but rather depends upon established habits of seeing and doing. The child naturally and unconsciously comes to realize that beauty is an inseparable quality of material products; and that a large part of the value of many industrial products from the simplest household utility to the complicated machine is Design. It places Art Education above mere training in Drawing, Painting, or Modeling, making it a steady growth in judgment.

Much of the subject matter of Drawing and Industrial Art and many of the projects are closely related to the accepted Courses of Study in Geography, History, Nature Study, Language, and Arithmetic. Teachers are demonstrating the fact that Drawing and Industrial Art intelligently used, tends to vitalize and therefore to unify and simplify the curriculum. Projects well chosen and processes wisely carried through may serve two important ends: (1) They may open the child's mind to the significance of the regular subjects of the curriculum, and (2) they may serve as an introduction to the understanding of various processes by which all useful raw materials are extracted from the earth and transformed into objects of human use.

"Behind the making of a simple booklet lies the whole history of our written language. The lumber in the playhouse or piece of furniture has its own story to tell of the north woods or the cypress swamp; of long journeys by land and water; of the saw mill and the planer. The cotton in the window hangings breathes a romance of old plantation days and speaks in the myriad tongues of the busy looms. The pencil in hand, the paper we write upon, the dishes used at the morning meal—all are ready to cry out if we will but give them voice."

"I dreamed the plowman told me, 'Grow your bread
And tend your fields alone, I plow no more.'
The weaver bade me spin the clothes I wore.
The mason quit the wall above my head.

Deserted so by all who warmed and fed
And sheltered me, my heart was sad and sore;
For seek what path I would I saw before
A thousand perils, and the sky was dead.

My eyes fell open and I saw the sun.
I heard a hundred hammers beat as one,
The plowboy whistle and the builder call,
And then I knew my happiness—and then
I felt my endless debt to other men;
And since that morning I have loved them all."

BRIEF OUTLINE BY GRADES.

Only fundamental industries are to be included and are to be considered in their interrelations. Constantly clearer perceptions of these industries are to be obtained by recurrence to them year after year, rather than taking up one and finishing it, then another. Special attention is to be given to local industries. Each industry should be studied from three points of view, viz.:

The **content side,** including all available information about the industry.

The **design side,** e. g., in the textile, printing and certain other industries it is obvious that design has a large place. It is understood that design is not limited to decoration.

Manipulation of materials, including fundamental processes related to the industries. Casting, soldering, and book binding are examples.

GRADE I.—Family and Individual needs of food, shelter, clothing, utensils and tools.

Illustration of Stories as a means of expression, correcting wrong impressions and giving form to new ones. Drawing, Color and Design taught incidentally in connection with Illustration.

Constructive problems related to Home Industries, e. g., playing store.

Story telling pictures related to subject matter.

GRADE II.—Primitive Methods of obtaining food, shelter, clothing, tools, utensils and means of transportation through study of Indian life.

Illustration of Stories, particularly Indian stories.

Constructive problems dealing with design, color and technique of materials, e. g., model a clay bowl.

Supplement all problems with pictures.

GRADE III.—How the "People of Other Lands" provide themselves with food, shelter, clothing, tools, utensils, machinery, and means of transportation.

Illustration of stories as a means of expressing, developing and shaping thought. Color, design, and technique are to be taught incidentally.

Constructive problems related to the life of the people of other lands, e. g., make a Japanese garden on the sand table.

Supplement each month's work with pictures related to the country and its people.

GRADE IV-B—Community needs in connection with study of Duluth. City Departments of Fire, Police, Health, Water, Light and Gas, Education, Parks and Playgrounds.

Illustration of themes occurring in all school subjects, with more definite drill on technique, composition, use of color, and design.

Constructive problems related to the City of Duluth, e. g., Make a booklet to receive all the interesting material collected while studying Duluth.

Picture Study will include noted civic buildings in connection with a study of Duluth's finest buildings, and pictures illustrating community life.

GRADE IV-A—Typical World Industries and how the people of different nations have supplied themselves with food, shelter, clothing, tools, utensils, machinery and means of transportation. Class choose a typical one for each country, e. g., The Textile Industry when studying Asia, Paper and Paper Making when studying Europe, etc. Collect material to be assembled later in a book.

Illustration of language, history and reading themes. This will necessitate study and drill on perspective, and the fundamental principles of design, composition, and color harmony.

Picture Study, including some of the world's great works of art in architecture, sculpture and painting, to supplement the study of other lands.

GRADE V-B—Transportation and Shipbuilding in connection with the study of North and South America and the West Indies.

Illustration of themes chosen from history, language and reading. This will demand a review and further development of perspective, composition, design and color.

Constructive problems to supplement the study of the industries, e. g., Make a transportation poster. A series of lessons on lettering and spacing should accompany this problem.

Study of pictures related to subject matter in all subjects.

GRADE V-A—Study of Records as developed in European Countries from primitive methods to the invention of the printing press.

Illustration of themes from histroy and literature. Continue study of perspective, color, composition, and design.

Constructive problems to re-enforee the Study of Records, e. g., Make a booklet illustrating the subject of Records, or make a clay tablet to illustrate primitive methods of keeping records.

Picture study to include John Alexander's Evolution of the Book in the Congressional Library at Washington and other pictures related to History and Literature.

GRADE VI-B—Primitive Industries of Peru and Egypt in connection with the Geography of South America and Africa.

Illustration of themes from History and Literature, including perspective, color, composition and design.

Constructive problems to supplement the study of primitive industries, e. g., design and weave a table runner, or model a clay tile or bowl; send to High School to be glazed and fired.

Picture Study illustrating Primitive Life, and History and Literature themes.

GRADE VI-A—Industries of Minnesota and how the different races of Asia have solved the problems related to the provision of food, shelter, clothing, tools, utensils, machinery, transportation, and records.

Illustration of themes from History and Geography. This includes the principles of perspective and the ability to apply them with greater facility, more understanding of the principles of composition, design, and color and the ability to select a theme which lends itself to illustration, assemble material, make preliminary sketches and the final composition.

Constructive problems related to the study of an industry, e. g., how to collect and assemble material on a given industry and bind it in book form.

Picture Study to include the decorations in the Minnesota State Capitol Building in St. Paul, and pictures illustrating History and Literature themes.

GRADE VII-B—A brief survey of the Industries of the United States, particularly those in which Design is an important factor.

Illustration of themes chosen from History and Literature. The pupils in this grade should have considerable facility in sketching common objects, figures in correct proportions, and sufficient knowledge of Composition, Design, and Color to make creditable illustrations.

Constructive problems which will supplement the design phase of American Industrial products, e. g., Make a book of American Industries showing good and bad examples of design and color. Textiles, furniture, wall paper, architecture, pottery, electric light fixtures, etc., will furnish abundant material for the book.

Supplement with pictures which show good design in every day things, and pictures related to History, Literature and Geography.

GRADE VII-A—A brief survey of European Industries particularly those in which Design is an important factor.

Illustration of themes chosen from History and Literature. Further study of principles of perspective, composition, color and design.

Constructive problems which will supplement the design phase of European Industries. Select three typical industries and trace from the raw material to the finished product with special reference to its historical development, the part played by design, and the development of skill in workmanship, e. g., the history of furniture making; history and development of the textile industry and the history of books and printed products.

Constructive problems to supplement the study of European Industries, e. g., rebind a pamphlet or paper covered book, design and make a simple piece of furniture, design and make an apron.

Picture Study to supplement the work in History, Geography and Literature.

GRADE VIII-B and A—A brief survey of the Industries of the World which contribute to the provision of food, shelter, clothing, utensils, tools and machinery, transportation, records and group organization. Divide class into groups; assign an industry to each to be developed from the standpoint of historical development, the part played by design and the fundamental processes involved.

Illustration of themes chosen from History and Literature. Pupils should be able to use drawing to aid their oral and written expression with a good working knowledge of the principles of perspective, composition, design, and color.

Constructive problem. Design and make a book on World Industries. Written work should be supplemented with illustrations, pictures, initial letters, freehand lettering and color sketches.

Picture Study to supplement the year's work. This will include some of the world's masterpieces in architecture, sculpture, painting, and design.

JUNIOR AND SENIOR HIGH SCHOOLS.

Further development of design, color, composition, art appreciation and technique through concrete problems related to every day living.

GENERAL DIRECTIONS FOR ALL GRADES.

Care and Use of Material.

The observance of the following general directions for all grades will save time and material and improve the work in Drawing and Industrial Art.

PENCILS.

Pencils for Drawing should not be used for other subjects. They should be kept sharpened wedge shaped. Good work cannot be done with unsharpened pencils, short stubs, or pencils that the pupils have put in their mouths, thus hardening the lead. A set of Dixon's Special Black No. 312 should be in every room above the Second Grade. In the first two grades the Dixon Beginner's pencil should be used.

WATER COLOR BOXES.

Color boxes should never be put away soiled. They should be carefully washed and wiped with a dry cloth. Much waste will be avoided if the cakes of color are cleaned with clear water and a brush at the close of the lesson.

BRUSHES.

Brushes must always be cleaned thoroughly and when put away, should have a good point. This point can be kept only by inverting the brush in a glass or other dish deep enough to hold the brushes upright, and allowing them to dry in this position. It destroys a brush to leave it standing in water. Each child should have a soft cloth for water color lessons. In order to gain freedom of movement and clean cut edges in water color work, the brush should be held near the end of the handle and nearly vertical.

CRAYONS.

When laying on a flat tone of color, the crayon should be held similar to the method of holding crayon when writing on the blackboard. The colors will not blend like water colors but should be used one upon the other until the desired color or tone is obtained. The color of the paper should always show through the crayon. Crayons should be used freely for illustrative drawing in the Primary Grades and for Design. Crayons, shorter than one inch, should not be used.

Crayons should never be mixed with other mediums, such as water colors or paper cutting.

PRESERVATION OF WORK.

Teachers are asked to collect from day to day, a few samples of the best work and occasionally sets of work of the entire class, where a project continuing over a period of time is being developed. These are for the purpose of comparing the progress of the

child from month to month and for exhibits when called for. Too much importance cannot be attached to the mounting of work. This will be taken up in conferences, in groups, and individually with teachers, but the following rules should be observed:

All illustrative material used in presenting lessons in Picture Study, Industrial Art subjects, Language, Geography, History, etc., should be mounted on gray mounting board cut in the following sizes: Choose the size best adapted to the picture 7″x10″, 10″x14″, or 12″x17″. The margin at the top and sides should be the same width, that at the bottom a little wider. Place a little paste on each corner of the picture when mounting. Mount only good material which is worth keeping on file for future use. Collect pictures and talk with supervisors before mounting.

PASTE AND PASTING.

The paste furnished in jars through this department is called Adhezo. It must be kept sealed to prevent spoiling, and should be diluted with water before using. This is the best paste on the market and should be used in making books, boats and other construction problems where there is considerable strain on the parts fitted together. The powder paste, also furnished by this department, and the paste made from the rule given in this notice should be used for mounting pictures in booklets and other light forms of construction work. It is extremely important that teachers understand and carry out these instructions otherwise they will be without paste before the end of the year. A sufficient amount will be provided for the year's work but we do not allow for waste through carelessness in planning. After an exercise when children have paste left on their desks it should be put back in the jar instead of being thrown into the waste paper basket.

In buildings in which cooking classes are held, teachers are asked to make paste using the following rule:

1 cup of flour.
1 cup of cold water.
Mix flour and water and pour the mixture into three cups of boiling water, stirring constantly.
Boil five minutes or until clear.
Add teaspoonful of powdered alum, put in a peanut butter or fruit jar and keep sealed.

In all Grades, including the Junior and Senior High Schools, when making booklets, or other problems where large, smooth surfaces are to be pasted, the desk should be covered with several layers of newspaper. As each sheet is soiled, it should be folded and discarded, and the work continued on the clean sheet underneath. The paste should be well stirred until smooth and foamy, and a sufficient amount for the lesson placed upon a piece of cardboard on the corner of the desk. It is then ready to apply rapidly and evenly. Satisfactory results may be obtained even where few

materials and limited equipment are available. With cover paper, wrapping paper, light cardboard, ruler, paste, and scissors for tools, an almost unlimited variety of booklets, portfolios, and books may be made at a school desk under conditions which are found in the ordinary class-room. The finished books and other problems planned in this Course of Study are like those made in the commercial world and the relation between school and professional processes and methods of procedure is thus easily established in the pupils' minds. This leads to an intelligent interest in the processes involved and to a love and respect for books.

PAPER.

To assist principals in the distribution, and teachers in identifying the various kinds of paper in use, the following suggestions will prove helpful. A collection of papers showing the different kinds and the stages in the manufacturing process has an educational value well worth the effort.

Manila drawing paper is the ordinary drawing paper cut 6x9, 9x12, and 12x18 inches, used for all drawing and illustration work, for lessons in water color, and for some constructive problems in Industrial Art. It is often desirable to practice with this paper before using heavier for boxes, boats, furniture, etc.

Bogus paper is a heavier gray paper, coarse in quality, very good for making booklet covers, valentines, Christmas cards, etc. It makes an excellent background for posters, paper cutting problems, and for mounting school work.

Wrapping paper is a coarse paper, usually of a tan or brown color, made from manila and other rope fibres. It stands hard usage and may be used for making the drinking cup, and for covering books in grades above the fourth, when construction paper is not available.

Construction paper is a heavy paper which comes in a variety of good colors alike on both sides, has an interesting texture, is tough in quality, and suitable for covering books and pamphlets, mounting drawings, primary construction work and a variety of uses.

Tonal papers are light weight construction papers, and are especially adapted to Primary work where the handling and pasting of coated paper is too difficult.

Cross section paper is any kind of paper ruled in squares. These squares are in various sizes, from one-eighth to 1 inch. One-quarter inch squared paper is the most useful for school use, such as for making designs and for lettering.

Chip board, tag board, cloth board and straw board are what are commonly called mounting boards. They come in various weights and qualities. They are made of fibres of straw, wood, grasses, and paper waste. They are used for

book covers, for mounting school work, and the heaviest weight cut 11x15 inches are to be used in the upper grades for drawing boards.

Coated paper is colored on one side only, and comes in a variety of beautiful colors. This is to be used above the Third Grade and in the Junior and Senior High Schools for posters in much the same way as water colors are used. It may also be used in design problems where units are repeated. A trade name adopted by one firm for coated papers is "Prismo" papers.

Color.

The following definitions and principles relative to the subject of color are fundamental, and satisfactory results can be obtained only by familiarity with them. The three color qualities are hue, value, and intensity.

Hue is the name of a color. It is the quality by which we distinguish one color from another, as red from blue, blue from yellow, etc. It does not tell us whether it is dark or light, strong or weak.

Value is the amount of light in color. It is the quality by which we distinguish a light color from a dark one. Color values are called tints and shades. A tint is a light value and a shade is a dark value.

Intensity is the strength of a color. It is the quality by which we distinguish a strong color from a weak one. To say that a rug is strong in color gives no hint of its hues or values, only its intensity. It must be measured in three ways: first, as to its hue or color; second, as to the amount of light, which is the value; and third, as to its purity or intensity. The omission of any one of these leaves us in doubt as to the character of a color as much as if the length of a room were omitted and it was described as so many feet wide and so many feet high. Hues appeal first to the child, then values and intensities. Color education begins with ability to recognize and name certain hues, such as red, yellow, green, blue, and violet. These hues are all seen in nature, in flowers, plants, insects, butterflies, rocks, sun-sets, etc. The child should handle colors; place them side by side for comparison, using colored textiles, beads, yarns, bits of ribbon, flowers, etc., and learn by simple, yet accurate means to describe each by its hue, its value, and its intensity.

Of the prismatic colors, the six major color sensations are violet, blue, green, yellow, orange, and red. Red, yellow, and blue are pure pigments, and violet, green, and orange can be made by combining any two of these. The remaining color is the complement.

Thus: Red plus yellow equals orange. Its complement is blue, and orange plus blue equals gray. Red plus blue equals violet. Its complement is yellow, and violet and yellow equals gray. Yellow plus blue equals green. Its complement is red, and green plus red equals gray.

Perception of color is crude at first. The child sees only the most obvious distinctions and prefers the strongest hues. But perception soon becomes refined by exercise, and when the child tries to imitate the subtle colors of nature with paints, he begins to realize that the strongest colors are not the most satisfactory for general use but rather the tempered ones which may be compared to the moderate sounds in music. He will learn in time that strong colors are more satisfying when used in small quantities with

larger spaces of neutral tones as backgrounds. He must learn to estimate their hue, their value, and their intensity and be able to tell in what degres his copy departs from the natural color. With this gain in perception and imitation of natural color, he feels a strong desire to invent combinations to please his fancy.

Thus the study of color divides itself into three related attitudes, which may be called recognition, imitation and invention. Recognition of color is fundamental but it would be tedious to spend a year or two in formal and dry exercises to train recognition of color alone; for each step in recognition is best tested by its imitation and arrangement. As the perception becomes keener, emphasis can be placed on the selection and grouping of color for design.

Picture Study.

The list of pictures with suggestions for study has been selected not only to supplement the other studies but to stimulate real interest and appreciation of the enduring works of art of all ages. A normal child is sensitive to beauty, is naturally interested in pictures and responsive to suggestive questions. Guard against making questions too minute. To ask too many questions about trifling details is to weary the child, and defeat the purpose of the lesson. The enthusiasm of the teacher means much to the child. A spirit of freedom and confidence will bring the best results. Try to get the child's emotional response rather than yours.

THE APPRECIATION LESSON.

"Appreciation is an attitude of mind which is passive, contemplative. It may grow out of an active attitude or emotion, or it may lead to one, but in either case the state changes from one of appreciation to something else. In appreciation the individual is quiescent. Appreciation, therefore, has no end outside of itself. It is a sufficient cause for being. The individual is satisfied with it. This puts appreciation into the category of recreation. Appreciation then always involves the pleasure tone, otherwise it could not be enjoyed."

"(1) It is of primary importance that the teacher bring to the class an enthusiasm and joy for the picture, music, poetry, person or achievement which he wishes to present;

(2) Children must not be forced to accept nor even encouraged to repeat the valuation determined by teachers;

(3) Spontaneous and sincere response upon the part of children should be accepted, even though it may not conform to the teacher's estimate;

(4) Children should be encouraged to choose from among many of the forms or situations presented for their approval those which they like best;

(5) The technique involved in the creation of the artistic form should be subordinated to enjoyment in the field of fine arts;

(6) Throughout, the play spirit should be predominant, for if the element of drudgery enters, appreciation disappears."

— Strayer and Norsworthy: "How to Teach."

CLASSIFICATION OF PICTURES.

Pictures which are adapted to the capacity and interest of the child, e. g.. for very young children, the story telling picture and those dealing with home and family life should be selected.

Mother's love, baby's winning ways, simple pleasures of home life, activities of children in their play, showing ways of doing things, etc.

Pictures portraying animals either alone or with children, children playing with pets, and pictures with strong action and movement.

Pictures chosen should be good examples of composition, drawing, and color.

METHOD OF PRESENTATION.

Interpretation.

This is the most important phase of picture study. It is not concerned with details, irrelevant matter about the picture or the artist, but deals with the picture itself. It should be developed through questions which provoke thought on the part of the children. These questions should be so framed as to bring out points which should be observed, e. g.,

Setting of picture: city or country; indoors or outdoors.

Is the landscape or are the people the center of interest?

Discuss grouping of figures, etc.

Has the picture balance? Where is the center of interest? Has the picture unity or is it a collection of unrelated units, etc.

Is the center of interest in the picture emphasized by size, color, or position.

Can you think of the picture in terms of spaces, or lines or masses of dark and light, or color regardless of subject?

Is the drawing good?

Are the colors harmonious?

Are the lines rhythmic?

Are the light and dark spaces in the picture arranged in an interesting way?

If so, how is that interest secured?

Has the artist created a beautiful picture?

If you think so, tell definitely as possible, wherein the beauty lies.

Does it afford you genuine pleasure to look at it?

How does it make you feel? Does it inspire you? How?

RESULTS WHICH MAY BE EXPECTED.

Intellectually.

Informational: consists of a body of knowledge about the picture, the artist, technique, etc.

Emotionally and aesthetically:

Feel beauty.

Respond to it as a never failing source of pleasure.

Spiritually:

Gives a broader and finer outlook.

Develops sentitiveness to the best which life has to give.

Is an actual force in life.

A knowledge and appreciation of a work of fine art does not come without effort, any more than a knowledge and appreciation of geometry comes by looking at the symbols. Before the highest pleasure and satisfaction can be derived from a masterpiece it must be sympathetically and intelligently analyzed and the facts concerning it clearly defined. The following books will be found helpful to those who are looking for material on this subject. They are on the reference shelves in the Public Library:

Arthur Wesley Dow—Composition.

Poore—Composition.

Emery, W. S.—How to Enjoy Pictures.

Caffin, Chas. H.—How to Study Pictures.

Caffin, Chas. H.—A Child's Guide to Pictures.

Bacon, Dolores—Pictures Every Child Should Know.

Bound Volumes of the School Arts Magazines.

De Forest and Caffin—A Short History of Art.

Barstow—Famous Pictures.

Reinach—Apollo—Story of Art Throughout the Ages.

Bailey, Henry Turner—Twelve Great Paintings.

The following firms carry the penny prints. A catalogue is in each building and when possible each child should have a print of his own. There are many pictures illustrating industrial processes, which will make valuable and interesting additions to the booklets which the children are making:

The University Prints, Newton, Massachusetts.

The Penny Print Company, Malden, Massachusetts.

The Elson Print Company, Belmont, Massachusetts.

The Brown Prints, Beverly, Massachusetts.

Pictures should be trimmed and carefully mounted. Margins at the top and sides should be the same, the one at the bottom a little wider. Place pictures where they can be easily seen by the children so that they will become familiar with them more or less incidentally. The following type lessons will furnish suggestions for the study of a picture, teachers adapting it to the grade and capacity of the children.

TYPE LESSON IN PICTURE STUDY FOR KINDERGARTEN AND GRADES I AND II.

Madonna of the Chair—By Raphael.

APPROACH: BUILDING UP OF MOOD.

Who will tell me what he sees in the picture?

Ask different children to tell what they see.

Of whom do you think when you look at this picture?

How many have a little baby brother or sister at home? Do you help your mother take care of him sometimes? How does she put him to sleep? Who would like to tell us about his baby brother or sister?

Do you remember when your mother rocked you to sleep? Did you like to have her sing a lullaby, or tell you a story?

DISCUSSION OF PICTURE.

Do you know what baby this is in the picture? Who can tell something about him?

Do you see someone else in the picture? His name is John and he is Jesus's cousin.

Do you know what it is he has in his hand? I wonder what he used it for? Why was it curved on the end?

AUTHOR AND NAME.

Long ago all pictures that were made were painted. Have you ever seen anyone paint with a brush?

Wasn't it wonderful for a man to be able to paint a picture like this, and make the mother and children look so beautiful?

Raphael could not see Jesus and his mother, so he found the loviest mother he could and painted her with her baby.

What do we call a man who paints pictures? Yes, he is an artist. Can you all say—artist?

Would you like to hear the name of the man who painted this picture? Raphael. Let us all say it.

He lived away across the ocean in Italy, long, long ago, even before Grandmother was born and long before that.

Every artist names his picture. Would you like to know the name of this picture? The artist called it the "Madonna of the Chair."

Wouldn't it be nice if you could tell mother when you get home what picture we talked about today? Let us say it again—"Madonna of the Chair."

We will put it here where every one who comes into the room can see it and where you can see it all the time.

I wonder who would like to come here and hold the picture and tell us about it? Let as many children talk about the picture as time will permit. Review the following day. Stand the picture where the children can go and look at it on their way in and out of the room.

THINGS TO DO SUGGESTED BY THE PICTURE.

Discuss another picture and stand it beside the first. The children will enjoy talking about the first one because they know it. Do not attempt another picture until they are very familiar with the first two.

Go on until all pictures on the outline are studied, always keeping up the review. Little children learn by talking and doing the things they have learned over and over again.

Choose the occasion for picture study with great care. If carried out in this spirit, the children will know and like all the pictures.

TYPE LESSON IN PICTURE STUDY FOR GRADES III TO XII.

Fog Warning—By Winslow Homer.

APPROACH: BUILDING UP OF MOOD BY—

Conversing with class about the sea; appearance at different times and under different conditions. Compare Lake Superior with the ocean.

Talk about boats; kinds; uses; different types of boats. Compare modern boats with those of fifty years ago, etc.

NAME OF PICTURE AND ARTIST WHO DID IT.

What would you call this picture if you had painted it? Why? The man who painted it called it "Fog Warning." He was an American and his name was Winslow Homer. He lived all his life close to the sea, on the Coast of Maine.

DISCUSSION.

What story does the picture tell you?

How does a sailor look and how does he dress?

What do you know about life on a boat? Have you taken a trip on a lake boat? Why must everything be done in an orderly and punctual way on a boat? What are the duties of a watchman? Etc.

Were the different objects and the man in the picture in this position when the artist painted them? How does an artist work on a picture like this? See type lesson on Illustration of Themes.

Explain to class how the artist makes many sketches of the different objects and people he wishes to put into his picture, then composes his picture from these just as they illustrate their history stories.

THINGS SUGGESTED BY THE PICTURE.

Can you tell what time of day it is in this picture?

How does the lake look at different times? Give a short description of it under different conditions.

Have you read any descriptions of the ocean or life at sea? Do you know any poems about the sea or about boats or about sailors? Are those suitable subjects for poems or beautiful descriptions?

Have you ever seen a design in which the designer used a boat for the main idea? Why is a boat a good subject for a design? How might it be used? What change might be made when using it in this way?

Those who are interested may make a book in which to put pictures, poems, descriptions, etc., about boats and the sea. Choose only the best examples for this book.

HOW TO CONDUCT A SERIES OF LESSONS IN ILLUSTRATION. GRADES I TO III.

Subject:—**The Pied Piper of Hamelin.**

AIM.

To teach children to express their ideas in an orderly way through drawing.

STANDARD FOR ILLUSTRATION.

An established habit of using drawing as a means of narrative expression. The drawings are largely pictorial in character, and serve to suggest ideas and to sustain the narrative rather than to represent correctly any facts of appearance that do not contribute directly to the movement of the story.

OUTLINE FOR SERIES OF LESSONS.

1. Story of Pied Piper told, followed by the illustration of different parts of the story.
   The emphasis here is on free expression.
2. Drawing of rats.
3. Drawing of people.
4. Drawing of mountains and river.

FIRST LESSON.

Story read or told. Do you like that story? Would you like to make pictures to go with that story?

Then let us think of all the parts of the story that would make good pictures. We want pictures that will show other people which story we are drawing. Through questions and discussion bring out all the places in the story that would make good pictures.

Close your eyes, choose the part of the story you would like to draw. Then think of all the things you would need in your picture. When you know which part you want, plan it on your paper with your finger first.

Who would like to tell us their plan? Emphasize here (1) that the important part of the story should be somewhere in the centre of the paper, not in the corners or near the edge (2) that nothing should be placed at the bottom of the paper.

Draw your picture.

Class criticism. All illustrations placed in front for comparison. Through class discussion the following points were brought out:

1. We need to draw rats better.
2. We need to draw children and the Pied Piper better.
3. We need to draw mountains and river better.
4. We need to make the story look better on the paper.

When the three succeeding lessons have been given or as much practice, consistent with the interest of the children, as

is advisable in the first grade, draw the picture again. Place these where they can be compared with the first lesson.

FINAL LESSON.

1. Dramatization of Pied Piper which has been developed since the first lesson.
2. Discussion of corrections in composition.
3. Discussion of colors to use.
4. Drawing of picture.
5. Class criticism.

TYPE LESSON FOR PRESENTING THEMES FOR ILLUSTRATION. GRADES IV TO VIII.

Each child chooses part of the story he wishes to represent and writes his subject with a list of objects he will need to draw for his composition. Keep this for reference.

Subject:—The Triumphal Procession of Columbus to the King's Court.

LIST OF OBJECTS.

Columbus mounted on a horse or riding in state in a Spanish vehicle.

Indians.

Sailors.

Crowd of people along the street.

Spanish buildings.

Each child makes a quick sketch to show general plan of composition. He will at once see the necessity of learning to draw parts of the composition better.

DETAILED AND CAREFUL SKETCHES OF

Action figures. Review action figures studied in previous grades.

Spanish dress. Collect pictures of this period and country. Go to the Public Library and look for books and pictures.

Horses. Collect pictures of prancing horses to aid in drawing horses better.

Spanish buildings.

A crowd of people. Find pictures which show how an artist represents a crowd of people. The surrender of Breda by Velasquez is one example. The Night Watch by Rembrandt, another.

ASSEMBLE OBJECTS FOR COMPOSITION.

Each child makes a second sketch. If he wishes he may trace his own detailed sketches of the objects he has made, but never from drawings other than his own.

Class criticism of plans for the compositions. The illustrations may be placed along the blackboard ledge

and questions similar to the following will call attention to the principles of good composition:

What is of greatest interest or importance in your picture?

How can you make it appear of most importance?

Will you emphasize it by size, color, or position?

What will determine your proportions of sky, land, street and buildings?

Show the class many pictures illustrating different ways in which artists bring out the center of interest.

Make the final composition.

Suggestions for the Study of an Industry.

THE LEATHER INDUSTRY.

APPROACH.

Of interest because of its general use, now and in the past.

Of interest because of local industries.

How do the boys and girls in our grade get their shoes?

How many people in Duluth earn their living working with leather?

Make lists of leather articles and decide upon those most useful to people in general.

What branches of the leather industry are represented in Duluth?

See Directory of Duluth Manufacturers.

How many people in the United States are employed in this industry?

What is the value of the yearly output?

What can we learn about the history of leather? See Encyclopedias, "Book of Knowledge," and other books.

What animals produce leather? The cow, calf, sheep, chamois, alligator, goat, deer, seal, pig.

How many different kinds of leather are there, and what makes this difference? What are imitation leathers?

Homes of animals that produce leather: Russia, Canada, United States, Australia, Spain, India, and formerly Peru.

Relation of climate, food, etc.

Manufacturing centres in the past and now.

Processes involved in preparation of leather for the market:

Tanning—Describe the process.

Currying—What effect does it have?

Finishing—Gives increased strength, toughness and pliancy.

MANUFACTURES.

Boots, shoes, moccasins, sandals, leggings, etc.

How made—Parts—What kinds give greatest amount of comfort to the wearer? Problem of buying good shoes.

Trunks, traveling bags, sample cases, tool and instrument cases, medicine cases, etc.

Saddles, halters, harness, whips, blankets, automobile tops, washers, belting, hose, etc.—Marshall-Wells Co.

Book covers. Look up history of hand-made books of the Midlde Ages.

Gloves and mittens, made by F. A. Patrick Company. What is tooled leather?

VISITS TO SHOE, TRUNK AND HARNESS FACTORIES, AND SHOEMAKER'S SHOP.

Class divided into groups; each group reports on a particular phase.

REPORTS OF VISITS—ORAL AND WRITTEN.

Letters of thanks to guides and to firms visited.

Accounts of various aspects of the subject.

THINGS TO DO.

Make charts and maps showing:

Samples of leather.

Sources of leather.

Manufacturing centers.

Stages of preparation and manufacture.

Different parts of a shoe, a glove, a trunk, a hand-bag.

Compute the cost of shoes for one boy and one girl for a year, and the cost for the entire room.

Compute cost of repairing shoes.

Learn the Shoemaker's Dance.

Look up History of the Leather Industry under these heads:

Use by primitive people for clothing before spinning and weaving were known.

Charlemagne granted to Monks of St. Omar the right to hunt in order that they might secure skins needed for binding books.

Used by Germans and Dutch in Ninth Century for binding manuscripts.

In Twelfth Century, Rouen in France had monopoly in manufacture of leather for France and England.

In Thirteenth and Fourteenth Centuries, Seville, Oporto, Morocco and Cordova had the monopoly.

In Sixteenth to Eighteenth Centuries, Holland had the monopoly.

In Sixteenth Century, Indian and Peruvian leathers were imported.

What is vellum? Morocco?

Look up references in literature such as Miles Standish's "boots of Cordovan leather," etc.

DRAWING AND DESIGN.

Draw cows, sheep, camel, alligator, etc.

Make simple landscape compositions showing these animals in their natural environment.

Draw one of these animals on squared paper, using only vertical and horizontal lines. Repeat to make a border.

Make a simple straight line border suitable for a tooled leather book cover.

Draw trunks, traveling bags, shoes, automobiles, etc.

Perspective.

Make a simple poster advertising the Duluth Trunk Company, A. W. Hartman Shoe Company, Smith Shoe Company, F. A. Patrick Company, or Northern Auto Top Company. To be done with colored papers or drawn and colored. Make the mounting of material such as pictures, etc., an exercise in design. Mount on cards 10x14. Consider margins, spacing, labels, etc., carefully.

REFERENCES.

H. G. Bennett: The Manufacture of Leather.
Chamberlain: How We Are Clothed.
And other Geographical Readers.
Carpenter: How the World is Clothed.
Encyclopedias.
Book of Knowledge.
Watt: Leather. (Public Library Reference Shelf.)

The above outline is presented to suggest a way of studying a particular industry. Children will have much haphazard information to offer. This must be gathered together, organized and supplemented by pictures, materials, actual processes when possible, and visits to shop and factories where the work is being carried on.

Clay and Clay Modeling.

Modeling in clay is one of the oldest crafts, for the reasons that the material is to be found almost everywhere and few tools are required for the simple processes.

The clay bed is found sometimes on the surface and sometimes in the subsoil beneath the garden mould, and varies greatly in quality according to the substances that compose it. Some kinds are fit for fine china, some for heavier pottery, some for common earthware, and some only for drain pipes and flower pots. The finest and purest clay is called Kaolin and is found only in China and Bohemia. Clay is usually of a blue or yellow color which burns red in the kiln. In order to purify clay and separate it from the roots and stones which it contains, it must be reduced with water to a liquid called slip, then dried and reduced to a powder. It is then sifted through sieves of various sizes and a little fine sand added when not present in the original soil. Clay without sand in it will be apt to crack in the drying and burning process. Clay with too much sand will be short and brittle in working. Primitive people discovered these facts and thus at a very early time found a material which became a valuable help in furnishing utensils for the primitive home.

Clay dishes were first burned in a very crude way by hollowing a place in the ground, filling it with stones and building a fire around them. In due time the use of glazes in making tiles for building purposes, for wine jugs, grain jars, and many kinds of kitchen and table ware was learned.

This was not confined, however, to objects of necessary use. We find buried with the ruins of ancient cities in Egypt, Greece, Pompeii, Peru, and elsewhere, many evidences of the potter's craft; among them articles for decorating the home, for personal adornment, and for religious uses, like the rings and scarabs of Egypt. All of these uses of clay from the rude art of prehistoric times to the finest product of modern skill is based upon the scientific fact that a small quantity of water in the clay, not removable by any ordinary means of drying, can be driven out by intense heat only. This causes a permanent change in the character of the clay. If the clay is not heated more than enough to dry it, when wet it will go back to its original condition.

There are three ways of making pottery. The first is by the hand method of building and was the method used by the American Indians. Long strips of clay were rolled under the hands and made of uniform size. These were then coiled in spiral form, the rolls being welded together with water. After reaching a certain height the walls of the growing jar would become weak under their own weight. The piece was then set aside to undergo a partial hardening when the work would be carried forward another stage. The shape being completed and partially dried, the maker would work over the whole surface with stones or simple tools until the marks of the coils had disappeared, and the walls

CLASS IN POTTERY

had reached a sufficient thinness. A great deal of skill was exercised in accomplishing this.

The second is the method of throwing on the potter's wheel A lump of clay is placed on a revolving disk and shaped by the hands of the potter, kept moist by dipping them constantly into slip. When the dish is partially dry the form may be perfected by means of turning. Handles and spouts are put on by working the parts together while moist with a little slip.

The third method is casting and is used when the walls are to be very thin and when it is desirable to have many pieces exactly alike in size and form. A plaster-of-Paris mould is first made and slip poured into this. The plaster-of-Paris absorbs the water, thus causing a thin coat of clay to adhere to the inside of the mould. When this becomes the desired thickness, the remaining slip is poured out leaving the damp form on the inside of the mould. This shrinks as it dries and the mould can be easily removed.

Whichever of these methods is used the next step is the baking or firing. The dishes are put in a kiln which is a box-like structure built of fireclay bricks and surrounded by flues in order that the fire may entirely surround the dishes, and yet not actually come in contact with them, as the smoke would discolor the ware. Most dishes are fired twice. The first firing is called the biscuit. The next step is glazing. A glaze is a glassy covering placed on wares to beautify them and to make them more serviceable. If the piece to be glazed has been fired once it should be soaked in clean water until all absorption has ceased. It is then wiped dry with a clean cloth, the glaze poured over it and set aside to dry. When dry it is put in the kiln and fired after which it will hold water and is ready for use.

The following concrete problems are suggested for a series of lessons extending through the grades. This will lay a foundation for the course in Pottery and Clay Modeling in the High School.

Teach children where clay comes from. Find stories of sculptors, especially those which tell about children who were artists, e. g., Antonio Canova found in Fifty Famous Stories, and Thorwaldsen. Show them pieces of pottery. Call their attention to statuary in the building. In all the clay modeling be willing to accept crude work in form and detail from little children but be careful that they learn the correct method of using clay and good habits of working. In the primary grades teach the meaning of model, fire, glaze and kiln. Have as much work fired and glazed as possible. Arrangements will be made to have this done at the Manual Training High School. Model from one lump of clay, e. g., in modeling an animal start with one lump, pulling out the ears, legs, etc. Do not stick them on with little pieces of clay. Children should acquire neat habits of working. It is not necessary to drop clay on the floor.

KINDERGARTEN.

Since clay is a medium in which children delight it should be used as a means of expression from early childhood. A jar of clay should be kept where it is accessible so that the children may use it during the free period as well as at other times. The best way to teach clay modeling is for the teacher to model with the children often, even if her work is only a little better than theirs. Many exercises connected with the projects will suggest themselves, such as modeling little dishes, animals, fruits, vegetables, etc.

GRADE I.

Use clay modeling as a means of illustration to supplement the sand table projects, e. g., story of The Three Bears. Model fruits, vegetables, tools and garden utensils.

Model the following animals: rabbit and chicken.

GRADE II.

Use clay modeling as a means of expression to supplement sand table projects, e. g., story of Cinderella. Model fruits, vegetables, dishes, tools, weapons, boats and trains.

Model a duck, a frog and a castle.

GRADE III.

Use clay modeling as a means of illustrating the life of the people in the different countries studied in Geography. Tell children about the Delft pottery made in Holland, the beautiful dishes and modeling done by the French people and the Japanese.

Model the Eskimo dog, the seal, goat and elephant.

In this grade the children may be expected to work for better proportions and form and spend more time in finishing their work.

GRADE IV.

Use clay modeling in connection with the study of Duluth to illustrate History and Geography projects in connection with the sand table. Model boats, bridges and a bowl for bulbs. In the A Fourth Grade where the children are studying the World as a Whole, draw attention to the Pottery Industry in Holland, Austria, France, Italy, England, China and Japan. In some parts of the city, children may be able to bring samples from home of different kinds of pottery.

GRADE V.

In connection with the subject of Records, show children how clay tablets were made by the Assyrians and Babylonians long ago before the invention of printing, to record events. In the A Fifth Grade, while studying about the Greeks, encourage children to find out about Greek vases, the different

kinds and their uses and the meanings of the pictures painted upon them.

GRADE VI.

In this grade when studying ancient civilizations like Peru, Egypt, Greece, Pompeii, and the Mound Builders and Indians of America, the children will be interested in learning how fragments of pottery and statuary have been excavated, sometimes in more than a hundred pieces, like the Winged Victory of Samothrace, and pieced together. Many times this led to the deciphering of inscriptions which threw much light on these ancient civilizations. Make a special study of clay tiles and each child design and make one for himself. Visit firms which sell tiles, like Dunlop and Moore, and others, and ask them to show their samples. Some of the different kinds made in America are Moravian tiles made in Doylestown, Pennsylvania; Rookwood tiles made in Cincinnati, Ohio, and Grueby tiles made in Boston.

GRADE VII.

Review the work of the Fourth, Fifth and Sixth Grades and continue The Study of Pottery as a World Industry, particularly the clay products of Europe and America. Learn the names of a few of the great porcelain factories of Europe and the characteristic designs of each, e. g., Sevres porcelain made in Paris, Dresden ware made in Meissen, Germany, Cantigalli made in Florence, Italy, and Royal Doulton and Crown Derby, made in England.

Model a vase and an animal paper weight.

GRADE VIII.

Review and study the Pottery of China and Japan. Kaolin, the finest and best clay, comes from China. Hence the people of China have excelled in this industry for thousands of years. Learn something about glazes, about firing pottery, and about the potter's wheel.

Look up references on the subject of clay modeling and the potter's wheel in literature, such as Longfellow's description in his poem called Keramos, A Handful of Clay from The Blueflower by Van Dyke, The Myth of Grandmother Kaolin by S. E. Wiltse, selections from the Rubiyait of Omar Khayoum and from Homer.

Primary Handwork With Projects Connected With Subject Matter.

FURNITURE FOR A DOLL HOUSE.

KITCHEN.

Chair: Fold 5″x5″ construction paper into sixteen squares. Cut off one row of squares from one side and one row from the top. This leaves nine squares. Cut up on both creases from bottom edge length of one square. Do the same at top edge. Fold and place flaps inside. Reinforce back. Cut out back of chair and legs.

Table: Fold 7″x7″ cover paper into sixteen squares. Cut off one row of squares. Turn paper so that short edge will be parallel with lower edge of desk. Cut up on both creases from bottom edge length of one square. Do the same at top edge. Fold and paste. Cut out legs.

Stove: Fold 7″x7″ constructon paper into sixteen squares. Cut on first crease from lower left edge the length of one square from bottom edge to first crease. Do the same on first crease from right edge. Do the same from top, only cut down two squares. Fold top of middle section down to first crease from bottom. Paste so that this middle section represents the warming oven. Reinforce the back. Paste on lids of some contrasting color. This may be modified to represent a gas stove.

Sink: Make in simple oblong box form.

Linen Press or Closet: Make in simple oblong box form. Insert shelves.

LIVING ROOM.

Chair: Make like kitchen chair, modifying legs and back to look like a living room chair.

Table: Make like kitchen table, modifying legs to look more like a library or living room table.

Book-Case: Make in simple box form and insert shelves. Cover paper of different colors may be folded and inserted to represent books.

DINING ROOM.

Chairs: See kitchen and living room chairs. Modify to represent dining room chairs.

Table: See kitchen and living room table.

Side Board: Fold one piece of 8″x8″ construction paper into sixteen squares. Cut off one row of squares. Place on desk with long edge parallel with desk. On the left hand side on first horizontal crease from left, slit from outer edge to first vertical

crease. Do same on right hand bottom edge. From left hand vertical crease from top cut down one square to first horizontal crease. Do same on right hand edge. Fold and paste into sideboard. Cut back down to one inch or less and reinforce.

BEDROOM.

Bed: This requires one piece of construction paper 4″x8″ and one piece 8″x8″. Fold 8″x8″ piece into sixteen squares. Fold outer edge to first crease on all four sides. Crease. Cut this off on opposite sides. Cut on first crease from lower left hand edge length of one square from bottom edge to first crease. Do same on top, cutting two small squares. Paste with flaps inside. Cut 4″x8″ piece of paper to make two squares 4″x4″. Fold each 4″x4″ piece in the middle, turn so the crease runs horizontally. Take bottom edge of one piece and fold to crease. Cut this off on last crease. Paste on head of bed. Cut the other 4″x4″ piece in the middle. Paste to foot of bed.

Chairs: See kitchen chair.

Dresser: See Sideboard. The only change necessary being 7″x7″ paper in place of 8″x8″.

Couch: Fold construction paper 8″x8″ on sixteen square. Cut off one row of squares. Place on desk horizontally. Fold bottom edge up to first crease. Fold top edge down to first crease. On both sides fold edge over to crease. Cut off on first crease all the way around. Place horizontally on desk. On both sides cut on each crease into the first fold. Paste one end so that it forms the foot of the couch. Paste one end so that the middle section stands up. Reinforce with a piece on the back.

BATHROOM.

Model tub and stationary wash stand of clay or construct of paper.

Wall paper for rooms may be made by ruling inch squares and making stick printed designs.

Rugs suitable in size, proportion and color should be made for the different rooms of rags brought by the children and of roving and Klearflax yarn furnished by the Department.

Curtains, hangings, counterpanes, towels, table spreads may be made of small pieces of lawn, scrim and other materials brought to school by the children. Paper may be substituted when children are unable to bring cloth.

Utensils for the kitchen, dining room and bath room should be made of clay.

HOUSE.

Construction paper 9″x9″. Fold on sixteen square. Starting at the bottom cut up on each crease to the first fold. Do the same at the top. Number the squares at the bottom and at the top, calling the one on the left 1, the next 2, the next 3, and the one on the right 4. Paste so that 2 is on top of 3 and half of 1 covers half of 4.

Let children use their own ideas and methods in finishing the houses. For example one may wish to have a porch or a chimney on the side or a green roof or a sun porch. Let them put the windows and doors where they wish. If any child suggests making a barn, garage, or boat house to go with his house, encourage him to do so.

STANDING CHRISTMAS TREE.

Two pieces of green construction paper 6″x9″. Place one on top of the other. Fold vertically in the middle. Place in the left hand with fold at the left. Measure two inches from bottom on the right side. Starting with this dot cut until within one-half inch of the fold. Cut up one and one-half inches and out to the edge, then diagonally up to the fold at the top. The bottom part forms the stand. Cut so that it measures one and one-quarter inches from the fold at the bottom and one and three-quarter inches at the top. The top part represents the tree. Cut indentations in the right edge. Unfold. Paste so that the left half of one tree covers the right half of the other. The tree may be made any size and may be trimmed with colored candles or balls.

Transportation. How to Construct Boats.

AIM.

To give the child an opportunity to use his own ideas in the construction of an object.

To make the problem of Transportation more real to the child.

MATERIAL.

Anything heavy enough to stand but not too heavy to bend without cracking.

PROCEDURE.

Teacher and children find all the pictures of boats possible.

Children draw them, at first copying, later from memory, and cut them out of paper.

Fold a square as we did in constructing houses, church, store, etc., and number the squares starting at the upper left corner, and ending in the lower right corner. Cut off 4, 8, 12 and 16. Paste 3 and 1 upon 2, and 15 and 13 upon 14. Make it small or large according to the size of the boat to be made.

Fold a paper and cut the silhouette of a boat as it looks from the side. This will make two boats exactly alike. Paste against the sides of the little box. Paste ends together and add sails or masts. Put lumber (tooth picks), iron ore, etc., on the freight boats or cotton on a river boat, etc.

How to Construct Wagons, Trucks, Sleds, Aeroplanes, etc.

Fold a square and number as before. Cut off 4, 8, 12 and 16. Fold 3 and 1 over 2 and paste. Fold 15 and 13 over 14 and paste. Draw around some round object the size the wheels are to be. Cut them out. Paste two circles together for one wheel to make it firmer.

After helping children thus far, let them finish in their own way. After one successful attempt they will devise different kinds of trucks, engines, etc., always starting with the box.

Booklet Problems.

A booklet problem has been planned for each grade from the first through the High School.

The plans for those above the third grade are described under the detailed outline for that grade. There is much interesting historical material on this subject which should be taught in connection with the constructive work. This falls under the larger topic of Records and includes Paper and Paper Products.

The booklet problem should correlate with the Geography, History, Spelling, Language and Nature Study. It is planned so that a definite step in the art of book binding shall be learned each year. For the teaching of design, including planning, spacing, proportions, lettering, margins, borders, and color no better problem can be undertaken. Let it extend over and include the entire semester's work, but begin planning for it at the beginning of the semester.

GRADE I.

Use manila drawing paper 12″x18″. Fold in center. Sew, using two-hole sewing. Make a simple unit for cover design, e. g., tree, bird, etc. Use colored crayons, or cut from colored tonal papers.

GRADE II.

Teach children that the cover is a little larger than the leaves and is usually made of a little heavier and more beautiful paper. Use manila drawing paper 12″x18″ for the leaves. Fold in center and cut off about a quarter of an inch on the top, bottom and right edge. Fold construction paper 12″x18″ for the cover. Sew, using two-hole sewing. For the cover design use a unit made of a complementary color. Black, gray or white may be used with the color; e. g., if blue con-

struction paper is used for the cover, the unit may be a black bird with orange breast, or Cinderella's castle with orange windows showing lights at night.

GRADE III.

Teach the children that the nicest books do not show stitching on the outside. This book cover has been planned to fit the pad paper used by the children in this grade for their written work. As the Language, Geography, History and Nature Study papers are finished they may be pasted in the book. For the cover use construction paper 14½"x18". Fold twice, first lengthwise, then the short way. Cut stubs two inches wide and one-quarter of an inch shorter than the book of pad paper. Fold and sew, using three-hole sewing. Sew through one thickness so that the stitches do not show on the outside of the cover. For cover design, cut a strip of construction paper about two inches wide and long enough to reach across the book. Paste horizontally across the cover about 1¼" from the top. On this children may arrange design units suggested by the study of a country; e. g., churns, goats, African huts, elephants, sail boats, etc. Space the units several different ways, choosing the best one.

Make a simple monogram, using the child's initials pasted on an oblong of paper about 1½"x2" of the same color as the border. Paste this near the bottom of the cover so that the space below this oblong is wider than the space above the border at the top.

Paper and Paper Products.

TYPE LESSON FOR GRADE III.

Children and teacher name and show things made out of paper, e. g.:

pad paper	wrapping paper
drawing paper	paper cups
tar paper	paper towels
cardboard	envelopes
colored paper	shelf paper
egg cartons	Red Cross posters
crepe paper	dressmaker's patterns
tissue paper	music
waxed paper	pictures
calendars	postal cards
games	wall paper
billboard posters	toys
books	paper napkins
blankets	Japanese parasols
newspapers	paper boxes, etc.

Ask children to find out how paper is made by asking at home or by the use of books at the Library. Let them tell the other

WEAVING WITH KLEARFLAX LINEN YARN

children what they have learned. The teacher may tell other interesting facts about paper and paper making.

People long ago wrote in many different ways and on ever so many different things. They cut in stone and clay. They scraped on birch bark. They wrote on skins of animals. Abraham Lincoln used to draw pictures, write poems, and do his arithmetic lessons with charcoal on his father's shovel. When it became too dirty he whittled off a layer until his father scolded because the shovel was getting too thin to be of use to him when he had to shovel snow.

The little Japanese children write on thin paper with brushes instead of pencils and pens, and they learn to be very beautiful writers.

In how many ways do we write in school? It is nice to have the blackboard to write upon but there are many things about writing on paper which are better. Can you name some?

It can be carried from place to place.

It can be made into books.

We can write more on paper.

Blackboard writing doesn't keep so well. If you brush up against it, it erases and then we can't tell what was written there.

We can write letters to mother and father when they are away which we could not do on the blackboard.

Does anybody know who first made paper? The Chinese, then the French and then the people of Holland, the country where the little Dutch children live. We all know where France is—away across the ocean where the soldiers were. France made paper long before we did. Five hundred years afterwards England and our country began to make paper. How many know what a poster is? Can you point to one or tell us where you saw one? When they first made paper in our country the mothers made posters out of cloth because they had more cloth than paper. They hung them up in the streets and instead of writing about the Red Cross or something like that, what do you suppose they wrote on these cloth posters? They wrote, "Everybody save your rags to make paper." "Wanted, twenty women to come to Mrs. Brown's and help make paper. Thursday and Friday. Bring your lunch and work all day." It was not easy. Sometimes they worked days and days and often had to throw it all away, because it was too rough. But they did not give up, they tried again. This time they got it smoother, but it tore too easily. Then they tried again and this time it was all right.

How many children have a Liberty Bond? If you haven't one, perhaps your father will let you look at his. Do you think they would make Liberty Bonds out of good paper or poor paper? Why? How do you think they make this paper? First men go to the mills and factories and get little pieces of cloth that are left over when they cut out men's shirts and linen clothes and take

them to the paper mill. These little pieces are nice and clean and they are better than big pieces for paper making because they must be cut up anyway. It takes many pieces and many women in the paper mill to sort these pieces. They look them over very carefully and if there are any dirty ones they are thrown aside because they would spoil the paper.

The pieces are cut in little strips, then washed in big machines and broken into tiny little pieces. Something is then put in which takes out any color that is left. Now the rags are one heap of little wet pieces. Can anybody think what should be done next? They are drained for two or three days and then rinsed. Then this heap of little pieces goes into a machine that makes it into long pieces like thread and then into big sheets like cloth. It is still wet and to dry it, it is put in a hot room and a man watches the furnace carefully to see that it is kept hot all the time. Everybody that helps to make the paper must do his part well or the paper will not be fine and smooth.

Then it goes to the finishing room where every sheet is ironed by machinery. The women then look it over and if there are any sheets that are not as good as the rest, they are thrown aside. Five hundred sheets are put up in a package. These packages are put on trucks and then on trains and boats which take them to the place where they make the Liberty Bonds. The writing on the bond says that we have paid money and it must be on good paper so that it will not get torn easily. It must be written with good ink, too. We said that the Chinese people made the first paper. They made the first ink, too. The little Chinese boys and girls have a right to be proud of the Chinamen long ago who made the first ink and paper, for what would we do without it?

Who knows what the "Evening Herald" is made of? Who can find out? The paper before it is printed, comes from Cloquet. It is made in the paper mills there out of spruce trees which grow in the woods. Would you like to know more about how those trees are made into paper for the "Evening Herald"? See what you can find to tell the class tomorrow.

Children make a collection of samples of paper and learn all they can about how different kinds of paper are made and then try to tell how these samples are made.

Make a little game out of this study of paper. e. g. One child may come to the front of the room and ask other children questions about paper, trying to see how many children he can catch. Let those whom he catches go and stand in one corner. After several lessons there will be very few who do not know the answers.

OUTLINE BY GRADES.

KINDERGARTEN.

AIMS.

In the Kindergarten the work centers around the occupations which contribute something to the home. The child's interests at this time are limited to a very small sphere and the problems which he undertakes must touch intimately his own well being and that of his family. These interests must be utilized by the Kindergartner to encourage and develop self expression, and to develop a love for beauty and order. Appreciation of and a love for beauty and order are developed by direct and indirect means like the following:

Through the personality of the Kindergartner herself.

Through the Kindergarten, including the permanent equipment and the things brought into the Kindergarten. This includes arrangement of furniture consistent with the structural lines of the room, the hanging of pictures, disposal of materials, color arrangement, etc. The project on hand at a given time should be evident in the general atmosphere of the room by subordinating other things for that time. A Kindergarten, like all school rooms, should be a busy work shop, but a cluttered condition should be avoided, if a feeling for order, the fundamental principle in design, is to be developed.

Through excursions to parks, industries, children's room in the Public Library, Museum in High School, etc.

Through care in the selection of objects and things brought into the Kindergarten.

Through a careful selection of pictures.

Through the varied occupations offered in the Kindergarten for encouraging self expression. Drawing and constructive play with materials occupy a large place. The Kindergartner should have a definite aim as to their value; and as to the development of technical skill and the degree of improvement to be expected in the manipulation of the materials employed. Drawing in the Kindergarten, as in other grades, should be used freely as a means of expression by which to increase ability to see clearly; to develop more ability for connected thinking; to clear up vague images and give form to new ones.

The Subject Matter and Projects should be chosen from familiar subjects such as these:

Home and school environment; home industries which contribute to problems of food, shelter, clothing, tools, and utensils.

Illustration of stories told to and by the children. These should usually be related to a particular project.

Painting and drawing flowers, trees, birds, houses, landscapes, etc., to illustrate a story.

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Technique should be developed incidentally by these means:

By the Kindergartner's drawing, modeling, and constructing with children just as she sings and plays with them.

By giving next step in advance of child's representation, not the finished drawing or product.

By the use of objects and pictures to clear up mistakes.

By the proper holding of brush or pencil.

By applying color sometimes within an outline to develop control followed by free drawing.

Feeling for Order or Design and Color will develop through these means:

Arrangement of things in the room.
Arrangement of flowers in a vase.
Arrangement of furniture in doll houses.
Care of materials when not in use.
Stringing nature materials.
Placing units for well spaced borders.
Mounting pictures.
Decoration of constructed objects.

The constructed objects made by the children should grow out of a need either in the school or in the home. The mediums to be used in the Kindergarten in carrying out the problems are crayons, water colors, clay, paper, light cardboard, textiles, wood and scissors. Choose the one best suited to carrying out the problems and do not mix mediums. Experimentation should be encouraged to find the mediums best suited to a given project, then these, as a rule, should be adopted by the entire group. The following outline is presented with a view to unifying the work in the different Kindergartens, and laying a foundation for the work of the First Grade.

SUBJECT MATTER AND PROJECTS.

September.

Study of Foods and the Occupations which contribute to Food Supply.

Make a grocery store out of a wooden box or heavy cardboard; model fruits and vegetables of clay. Do not color. Make miniature cans and berry boxes of construction paper. Paint apples, tomatoes, carrots, peaches, pumpkins, plums, corn, etc., and make labels for cans.

Draw and paint fruits, vegetables, birds, leaves, trees in autumn coloring; wheelbarrows, rakes, hoes, and other tools used in harvesting crops.

October.

Begin a study of Textiles. Teach weaving with paper and use the interest in Hallow-een as a means for expression in Drawing and Construction.

Weave a paper mat and make a handkerchief case of it.

Start a chart showing as many different kinds of weaving as possible.

Draw and cut Brownies.

Cut and make Jack o' Lanterns.

November.

Homes of People and Animals.

Children make a chart showing pictures of different kinds of houses.

Make a chart showing homes of birds and animals.

Learn to draw a house so that it stands straight and so that both ends of the house are not seen at the same time.

Construct houses of heavy paper.

Connect the Thanksgiving story with how the Indians and Puritans make homes for themselves.

December.

To develop a spirit of helpfulness in preparing for a celebration like the Christmas and New Year festivities.

Make candy boxes, standing Christmas trees, etc., with which to decorate the Christmas dinner table.

Make decorations for the Christmas tree.

Make something for each other and for the different members of the family. These may be:

A match holder modeled from a solid piece of soft clay, glazed and fired;

A pin tray and ash tray for mother and father, made of clay in the same way.

Napkin rings of heavy paper;

Candy boxes;

Booklets of work done by children, e. g., a nature study booklet;

Calendar.

Draw and cut a fire place, a stocking, a sled and a snow man.

January.

Review and continuation of a study of Textiles.

Weave a hammock of cotton roving. This should not involve turning around. Leave fringe on both sides.

Finish chart of Textiles begun in October. Be able to distinguish between cotton and wool and match colors in textiles.

February.

Relation between Love of Home and Family, and Love of Country. Why do people live in groups, choose leaders, etc.

Illustration of patriotic stories about Washington, Lincoln, and others.

Plan a patriotic parade for Lincoln's or Washington's birthday.

Make a soldier cap.
Draw and color the flag.
Mount flag on a stick.
Practice marching, carrying flags.

March.

Transportation of people and goods from place to place.

Make a chart showing many different ways by which people carry things from one place to another. Show the evolution as much as possible.

Draw wheelbarrows, delivery wagons, canoes, boats, steamships, airships, trains, street cars, etc.

Let children choose from the above and construct models of boats, street cars, etc., of heavy paper.

April.

Occupations of the mother in the home and occupations of father in and outside of the home.

Make a series of drawings showing the different occupations necessary in the home; washing, moving, cooking, sweeping, sewing, mending, shopping, getting children ready for school, etc.

Make a series of drawings and cuttings illustrating the occupations of the father. Choose most typical ones for illustration.

Make an Easter basket.

Make an Easter card or booklet with a rabbit or chicken for decoration.

Draw the robin and bluebird.

May and June.

The use of color in its relation to food, shelter, clothing, the symbolism of color in flags, and use of bright and dull colors in nature, such as birds, flowers, the sky, grass, etc.

Make a color booklet consisting of drawings, cuttings, pencil, crayon, and water color drawings of birds, houses, etc., paper dolls in costume, trees, landscapes and borders.

Finish food, shelter, textile and transportation charts.

Make an envelope in which to put the work to be taken home.

Picture Study.

The following pictures should be mounted on gray mounting board early in the year and the children allowed to become familiar with them incidentally. See type lesson in Picture Study for Kindergarten and Primary Grades.

Madonna of the Chair—Raphael.
The First Step—Millet.

Feeding Her Birds—Millet.
Feeding the Hens—Millet.
Helping Hand—Renouf.
Woman Churning—Millet.
The Apple Parer—Ter Borch.
Can't You Talk—Holmes.
Saved—Landseer.
Baby Stuart—Van Dyck.

STANDARDS OF ATTAINMENT.

Be able to use drawing freely as a means of expression to illustrate stories, using crude symbols, good enough to satisfy the child.

Be able to draw a house correctly, so that one end and side show at once, not two ends and a side as children naturally draw it. If we can prevent drawing in this way, it will save a great deal of time in the first grade. Other mistakes in drawing made repeatedly by the children should be corrected by substituting a better way.

Be able to paint within an outline, e. g., circle.

Be able to cut on a line.

Paint flowers, fruits and trees freehand. These will be crude but the child is learning to use this medium in a free, large way. In this work the colors should not be mixed in the box, e. g., in making green put yellow on the paper and the blue into the yellow, wet enough so that the colors will blend of themselves.

Know how to do the simplest kind of weaving with short strips.

Know the six standard colors.

Construct boxes, houses and wagons using 16 fold as a basis and working out original problems from that.

Be familiar with pictures outlined for this grade and be able to talk about them.

GRADE I-B.

The work of the first two grades is planned in a slightly different way for children entering school in February. It is not so much a change in subject matter and projects as an adaptation to the time of year.

AIMS.

To awaken an interest in drawing as a means of expression and to encourage its use as a language. This includes "not only its use as a means of expressing thought but as a means of developing and shaping thought." The development of expression should be encouraged through the story telling interest and the interest in play. To give the child some idea of the Home and Community Industries which contribute to the supply of food, shelter, and clothing for the family. To quote from the Minnesota Course of Study—"Through play, curiosity, imitation, emulation, or imagination, and some required duties, children should become acquainted with the larger principles of industry long before their feet must 'like a colt's, for work be shod and made to tread the mills of toil.'"

SUBJECT MATTER AND PROJECTS BY MONTHS.

September, October and November.

Study of food, shelter, clothing, and the occupations and raw materials which contribute to their supply. Play store. Play farmer. Play meat man. Play milkman. Children bring empty soap boxes and arrange to represent counters so that one or more children can stand behind them. This project will furnish opportunities for dramatization. One child may be a farmer and bring vegetables to market in a wagon or in a basket, another the milkman, etc. Model vegetables out of clay. Do not color. Cut circles from heavy paper to represent coins, and paper money may be made by coloring drawing paper with crayons. Some child may be able to bring a toy telephone so that the farmers may telephone for information. One child may be the milkman. Small sized grape juice bottles may be used for milk bottles and chalky water may represent milk. In another part of the room or on a different day the children may represent a meat market. Small boxes and cans for holding different things may be made of heavy paper. After the children have been helped a little, they will be able to work out their own ideas and make this a very original and valuable exercise.

Model in clay a set of dishes and set a table. A dramatization may be worked out here, too, e. g., children bring different foods and put them on the table, telling from where and how we obtained them. Only wholesome foods should be accepted, such as milk, bacon, eggs, oranges, cream of wheat,

FIRST GRADE KNITTING—LIBERTY SCHOOL

etc. The table cloth with napkins to match may be made by taking a piece of white paper and stick printing a border. Forks, knives, spoons, plates, saucers may be made of clay or cut out of paper.

To further carry out the food project, assemble cuttings for a food border for the blackboard. Use some device for making these cuttings a connected border, e. g.:

Place strips of construction paper near the top of the blackboard. Cut a strip of paper a little over a quarter of an inch wide extending all the way across to represent the table line. Place the vegetables and fruits in groups, leaving equal spaces between.

Make large baskets, uniform in size and shape. Place these at equal intervals on the construction paper. Paste the vegetable cuttings in the baskets. This may be done in color, using a neutral tone for the background with the baskets black, dark brown or green.

The border may be divided into panels by strips of manila drawing paper. Each panel may represent a different step in taking the food from the farmer to the child who eats it, e. g.:

A single farm house, barn, and vegetable growing.
Farm house, animals around it.
Truck, train, wagon, boat.
Simple table with two children eating from bowls.

For language the children may point to the different panels in the border and tell how the food reaches them.

Make a paper doll family dressed in complementary colors.

Make a color booklet of fruits, vegetables, birds, trees and flowers. This problem may extend over the entire semester. The aims in making this booklet are:

To teach children to recognize the six standard colors: Violet, blue, green, yellow, orange, and red.

To teach what is meant by light color and dark color.

To teach children to hold crayon and brush correctly.

To teach how to arrange and paste samples.

To teach how to fold 12″x18″ drawing paper for a booklet and to teach two-hole sewing of booklet.

Cover design. Fold 6″x9″ manila drawing paper in middle and tear. Place this vertically on the cover a little above the center. Draw around it with colored crayons. Draw a simple unit in it, e. g., Christmas tree.

Contents. The book should include the following in the order given:

a. The six standard colors in 2″ circles, yellow at the top, blue at the left, and red at the right, with orange, violet, and green between in the proper places. Do this on the first page with crayons and on the second page with water colors.

b. Match these colors with samples of cotton, silk, and

woolen textiles and arrange in the same way on another page.

c. Make borders of dolls taking hold of hands for another page.

d. Draw a house showing a light and dark tone of the same color. Draw a log house in the same way.

e. Draw a castle, using complementary colors.

f. Find a picture which shows complementary colors and paste on one page. Complementary colors may be spoken of as the colors which are friends.

Read Chap. VIII, The Industrial Arts in Elementary Education, by Winslow and Gompf.

g. Draw beet, carrot, pumpkin, squash, potato, pear, apple, and banana with crayons.

h. Draw and paint birds, flowers, and trees mentioned in Nature Study outline.

Put into the book drawings of objects which received drill during each month, e. g., in the Three Bear Story, the bears, chairs, table, etc.

December.

Christmas projects which will contribute to the Christmas festivities at home and at school.

Fold a house on 16 square. Cut a square from green construction paper 9″x12″. Paste cotton batting or white paper torn with a rough edge on the roof to represent snow. Make a little red chimney. Paste on pieces to represent windows. Paste the house on a cardboard for the base. Use it for a bank. Money can be put in through the chimney or a slit can be cut in the roof. Cut colored Santa Claus going down the chimney.

Make a box on 16 fold. Cut a square 9″x12″ red construction paper. Cut off one row of squares. Fold to make oblong box. Make a sled to fit over this.

Christmas card. Fold manila drawing paper 6″x9″. For design, cut conventional Christmas tree of green. Cut bright colored balls or candles for decoration.

Make standing Christmas trees.

Represent the Christmas story on the sand table or ordinary table.

January.

To learn how to illustrate a story. Study Chapter I, pp. 32-46 in How Children Learn to Draw and Chapter III in Fine and Industrial Art in Elementary Education, both by Walter Sargent, for point of view for the teaching of illustration. Illustrate the story of the Three Bears.

Steps:

Tell the story to children.
Children illustrate with crayons.
Draw, model and make cuttings of bears.

Model bowls for the three bears.

Draw houses so that they stand straight.

Practice at blackboard making vertical lines.

Make action figures of Goldilocks running.

Draw and make cuttings of trees.

Draw and construct chairs, tables, and beds.

Illustrate the story again. Compare with first illustration.

Illustrate other stories in the same way. Keep sets of drawings made by the same child to show progress.

Picture Study.

By the end of the semester children should be familiar with the following pictures. See type lesson.

Feeding Her Birds—Millet.
The First Step—Millet.
Baby Stuart—Van Dyck.
Children of Charles I—Van Dyck.
Madonna of the Chair—Raphael.
The Wolf Hound—Paul Potter.
Calling in the Herd—Millet.
Dignity and Impudence—Landseer.
The Sheepfold—Jacque.
The Balloon—Dupre.

STANDARDS OF ATTAINMENT.

The child should be able to tell a story by means of drawing in a way that satisfies himself rather than to represent proportions or facts correctly. The symbols he uses for objects and people may be very crude and yet tell the story in a direct and convincing way.

Be able to draw and make paper cuttings of a bear, a house, a chair, a table, three birds chosen from Course in Nature Study, two varieties of pine trees, a bare tree, a wagon, a wheelbarrow, and a castle.

Be able to paint two flowers, a tree, and a simple landscape showing sky and land or water, blending colors on the paper.

Know and be able to match the six standard colors.

Be able to make a small box and house based on 16 fold, and a standing Christmas tree.

Be able to fold paper and make a booklet using two-hole sewing. Be able to recognize, name, and talk about the pictures outlined for this grade.

Be able to model in clay, fruits and vegetables, a bear, and small clay dishes used in fitting up stores.

GRADE I-B ENTERING IN FEBRUARY.

February and March.

Study of foods, the occupations and raw materials which contribute to their supply. Play store. Play farmer. Play meat man. Play milkman. Children bring empty soap boxes and arrange them to represent counters so that one or more children can stand behind them. This project will furnish opportunities for dramatization. One child may be a farmer and bring his vegetables to market in a wagon or in a basket, another the milkman, etc. Model vegetables out of clay. Do not color. Cut circles from heavy paper to represent coins and make paper money by coloring drawing paper with crayons. Some child may be able to bring a toy telephone so that the farmers can telephone for information. One child may be the milkman. Small sized grape-juice bottles may be used for milk bottles and chalky water may represent milk. In another part of the room or on a different day, the children may represent a meat market. Small boxes and cans for holding different things may be made of heavy paper. After the children have been helped a little, they will be able to work out their own ideas and make this a very original and valuable exercise.

Model in clay a set of dishes and set a table. Here, too, dramatization may be worked out, e. g., children bring different foods, put them on the table telling where and how we obtained them. Only wholesome foods should be accepted, such as milk, bacon, eggs, oranges, cream of wheat, etc. Make a table cloth with napkins to match, by stick printing a border on sheets of white paper. Forks, knives, spoons, plates, saucers may be made of clay or cut out of paper.

Start a booklet to contain children's work for the semester.

This problem may extend over the entire semester. The aims in making this booklet are these:

To teach children to hold crayons and brush correctly.

To teach how to arrange and paste samples.

To teach how to fold 12″x18″ drawing paper for a booklet and to teach two-hole sewing of booklet.

To make a cover design. Fold 6″x9″ manila drawing paper in middle and tear. Place this vertically on the cover a little above the center. Draw around it with colored crayons. Draw a simple unit in it, e. g., a tree.

To teach children to recognize the six standard colors: Violet, blue, green, yellow, orange and red.

To teach what is meant by light color and dark color. The book should include the following in the order given:

The six standard colors in 2″ circles or squares, yellow at the top, blue at the left, and red at the right, with orange, violet, and green between in the proper places.

Do this on the first page with crayons and on the second page with water colors.

Match these colors with samples of cotton, silk, and woolen textiles and arrange in the same way on another page.

Draw a house showing a light and dark tone of the same color. Draw a log house in the same way.

Draw a castle using complementary colors.

Find a picture which shows complementary colors and paste on one page. Complementary colors may be spoken of as the colors which are friends.

Make drawings of objects used in illustrating stories, e. g., in the Three Bear Story; the bears, a chair, a table, etc.

Draw and paint birds, flowers, and trees mentioned in Nature Study Course.

April.

To learn how to illustrate a story. Study Chapter I, pp. 32-46, in How Children Learn to Draw, and Chapter III in Fine and Industrial Art in Elementary Education, both by Walter Sargent, for point of view on the teaching of illustration.

Illustrate the Story of the Three Bears.

Steps:

Tell the story to children.
Children illustrate with crayons.
Draw, model and make cuttings of bears.
Model bowls for the three bears.
Draw houses so that they stand straight.
Practice at blackboard making vertical lines.
Make action figures of Goldilocks running.
Draw and make cuttings of trees.
Draw and construct chairs, tables, and beds.

Illustrate the story again; compare with first illustration.

Illustrate other short stories.

May and June.

Draw in crayon and paint flowers and twigs.

Drill on colors with reference especially to flowers.

Make a spring border. Children cut units out of colored paper. Choose something which radiates springtime, e. g., daffodils, tulips, little yellow chickens.

Draw several of the common birds. See Course in Nature Study.

Finish the term booklet.

Picture Study.

The following pictures should be carefully mounted early in the year and brought out from time to time during the semester at the discretion of the teacher:

See special treatise and type lessons on Picture Study.
Feeding Her Birds—Millet.
The First Step—Millet.
Children of Charles I—Van Dyck.
Baby Stuart—Van Dyck.
Madonna of the Chair—Raphael.
The Wolf Hound—Paul Potter.
Calling in the Herd—Millet.
The Sheepfold—Jacque.
The Balloon—Dupre.
The Girl With the Cat—Haecker.

STANDARDS OF ATTAINMENT.

The child should be able to tell a story by means of drawing in a way that satisfies himself. The symbols he uses may be very crude.

Learn to draw the following well, making the beginning of a graphic vocabulary: House, castle, bear, chair, table, three birds chosen from Nature Study outline, two kinds of pine trees, a bare tree, wagon, and wheelbarrow.

Be able to paint two flowers, a tree and a simple landscape showing sky and land or sky and water.

Know the six standard colors.

Be able to make a small box and a house based on 16 fold and a standing Christmas tree. Be able to fold paper and make a booklet using two-hole sewing.

Be able to name and talk about the pictures on the outline.

Be able to model in clay fruits and vegetables, bear and dishes.

GRADE I-A—ENTERING IN SEPTEMBER.

SUBJECT MATTER AND PROJECTS BY MONTHS.

September, October and November.

1. Study of foods, the occupations, and raw materials which contribute to their supply. Play store. Play farmer. Play meat man. Children bring empty soap boxes and arrange them to represent counters so that one or more children can stand behind them. This project will furnish opportunities for dramatization. One child will be a farmer and bring his vegetables to market in a wagon or in a basket, another the milkman, etc. Model vegetables out of clay. Do not color. Cut circles from heavy paper to represent coins and make paper money by coloring drawing paper with crayons. Some child may be able to bring a toy telephone so that the farmers can telephone for information. One child may be the milkman. Small sized grape-juice bottles may be used for milk bottles and chalky water may represent milk. In another part of the room or on a different day, the children may represent a meat market. Small boxes and cans for holding different things may be made of heavy paper. After the children have been helped a little, they will be able to work out their own ideas and make this a very original and valuable exercise.

2. Model in clay a set of dishes and set a table. Here, too, dramatization may be worked out, e. g., children bring different foods, put them on the table, telling where they came from. Only wholesome foods should be accepted, such as milk, bacon, eggs, or oranges, cream of wheat, etc. Make a table cloth with napkins to match by stick printing a border on sheet of white paper. Forks, knives, spoons, plates, saucers may be made of clay or cut out of paper.

3. Start a booklet to contain children's work for the semester. This problem may extend over the entire semester. The aims in making this booklet are these:

(a) To teach what is meant by light color and dark color.
(b) To teach what is meant by dull color and bright color.
(c) To teach complementary colors.
(d) To teach children to hold crayon and brush correctly.
(e) To teach how to arrange and paste samples.
(f) To teach how to fold 12″x18″ drawing paper for a booklet and to teach two-hole sewing of a booklet.
(g) To make a cover design. Fold 6″x9″ manila drawing paper in middle and tear. Place this vertically on the cover a little above the center. Draw around it with colored crayon. Draw a simple unit on it, e. g., a tree, bird.

(h) To drill on a few objects, (those used in illustration of stories, Nature Study, etc.), so that the child acquires a vocabulary in drawing similar to that in language.

The book should include the following in the order given:

(a) The six standard colors in 2 inch circles or squares, yellow at the top, blue at the left, and red at the right with orange, violet and green between in the proper places. Do this on the first page with crayons and on the second page with water colors.

(b) Draw a house showing a light and dark tone of the same color. Draw a log house in the same way.

(c) Match these colors with samples of cotton, silk, and woolen textiles and arrange in the same way on another page.

(d) Draw a castle, using complementary colors red and green. Draw another castle with a road leading up to it. This time use purple and yellow. Draw a castle high up on a rock with a bridge leading to it. Use blue and orange.

(e) Find a picture which shows complementary colors and paste on one page. Complementary colors may be spoken on as the colors which are friends.

(f) Put in this book the objects drilled on each month, e. g., in illustration, Peter Rabbit, tree, house, in Nature Study, birds, flowers, trees.

4. Weave a rug. Use cardboard looms, cut woof threads of even lengths and weave without turning around, leaving a fringe on the sides.

5. The illustration work in November correlates with the Food Problem, e. g., The First Thanksgiving, e. g., My Thanksgiving Dinner, etc.

December.

The work this month should group itself around the activities of home and school during the Christmas season.

1. Have as much free illustration work as possible for class work and seat work.

2. Make standing Christmas trees.

3. Make a house. Cotton batting or white paper may be pasted on the roof to represent snow and a Santa Claus going down the chimney.

4. Christmas card. Use Manila drawing paper 6″x9″. Cut conventional Christmas tree out of green construction paper. Paste on the drawing paper. Decorate with bright colored balls, candles, toys, etc.

5. Represent the Christmas story on the sand table.

January.

1. Finish the term booklet so that the children can take them home the last day.

2. Illustrate the story of Peter Rabbit. Study Chapter I, pp. 32-46, in How Children Learn to Draw and Chapter III in Fine and Industrial Art in Elementary Education, both by Walter Sargent, for point of view on the teaching of illustration.

Steps:

Tell the story to children.

Children illustrate with crayons.

Draw, model and cut rabbits. Draw objects needed to represent the story, e. g., fence, sprinkling can, tree, meadow, house, gate, farmer, etc.

Make action figures. Dress like a farmer.

Use cutting for seat work. Little children learn by doing repeatedly the same thing.

Illustrate the story again.

Picture Study.

Review 1B list of pictures and study the following. See type lesson:

Children of Earl Gower—Romney.
Feeding the Hens—Millet.
Sistine Madonna—Raphael.
Don Carlos on Horseback—Velasquez.
Shoeing the Horse—Landseer.
Learning to Knit—Millet.
School in Brittany—Geoffroy.
Boy With the Torn Hat—Sully.
Girl With the Cat—Haecker.

STANDARDS OF ATTAINMENT.

Be able to use drawing freely to illustrate stories, the aim being to tell the story in a way that satisfies the child rather than to be able to represent forms correctly. Learn to draw, construct and model a few things well, thus laying a foundation for future work.

Human figure drawn in different positions to illustrate action.

Be able to draw and make paper cuttings of a rabbit, a chicken, two birds chosen from Course in Nature Study, a house, a log cabin, a wagon, and an automobile, a poplar tree, canoe and a wigwam.

Be able to paint a tulip, a daffodil, a pine tree, a Lombardy poplar, sky, ground, and water.

Know and be able to match the six standard colors and a light and dark color. Know the complementary colors.

Be able to make a box, a house, and a wagon based on the sixteen fold.

Know what a border and a surface pattern are and be able to make each.

Know that different mediums should not be mixed.

Be able to recognize and to talk about the ten pictures outlined for this grade. Be able to model a rabbit, a chicken and a bowl.

Weave a rug, cutting wool and making fringe on the sides. Do not attempt continuous weaving until the Second Grade. Keep the process simple but require neatness and firmness.

Model fruits, vegetables, and dishes.

Be able to use the one inch ruler.

February.

Illustrate several patriotic stories, following the plan used for "The Three Bears."

Begin the building of a playhouse. This project may extend through the rest of the year.

Discussion of materials to be used. Advantages and disadvantages of wood and brick.

Workers needed: Carpenter, mason, painter, plasterer, plumber, electrician, and paper hanger. Make drawings of the house. Make it stand straight.

Secure two or three soap boxes from nearby grocery store and build the house, or make a house of heavy mounting board by scoring and bending in two places. This will show three walls. Bend another piece and make a pitched roof.

See the Industrial Arts in Elementary Education by Winslow and Gompf, p. 64, and Primary Handwork by Miss Dobbs.

Weave rugs for the floor. Use cardboard looms, cut woof threads of even lengths, and weave without turning around, leaving a fringe on the sides.

Make wall paper, teaching use of stick prints and one inch ruler.

Make furniture of heavy construction paper. See special notice on Primary Handwork.

Use the time allotment one day for the making of valentines.

March and April—Illustration.

For the illustration work this month choose stories about animals, Peter Rabbit, Chicken Little, etc.

Draw, cut and model the animals so frequently that the child can draw five animal forms from memory.

Draw in crayons the birds mentioned in Nature Study Course.

Indicate the human figure in any position, using merely action lines. See B-I outline for the teaching of illustration.

May and June—Color.

Cut daffodils and tulips out of colored paper. Paint them with water colors, and draw with crayons.

Review standard colors, violet, blue, green, yellow, orange and red.

Draw on light and dark color.

Teach complementary colors. Call them color friends.

Draw trees mentioned in Nature Study Course: Fir, Lombardy poplar, bare trees and pine trees.

Illustration. Choose stories which have the human figure in action, e. g., gardening, going to a fire, etc.

Picture Study.

Review 1-B list of pictures and study the following. (See type lesson):

Boy With Torn Hat—Sully.
Don Carlos on Horseback—Velàsquez.
Shoeing the Horse—Landseer.
Learning to Knit—Millet.
School in Brittany—Geoffray.
Children of Earl Gower—Romney.
Feeding the Hens—Millet.

STANDARDS OF ATTAINMENT.

Be able to use drawing freely to illustrate stories, the aim being to tell the story in a way that satisfies the child rather than to represent forms correctly. Learn to draw, model and construct a few things well, thus laying the foundation for future drawing.

Human figure drawn in different positions to illustrate action.

Be able to draw and make cuttings of a rabbit, chicken, two birds chosen from Course in Nature Study, a house, log cabin, wagon, automobile, canoe, wigwam.

Be able to paint a tulip, daffodil, pine tree, Lombardy poplar, sky, ground and water.

Know and be able to match the six standard colors and a light and dark color. Know the complementary colors.

Be able to make a box, wagon and house on sixteen fold.

Know what a border and surface pattern are and be able to make each.

Know that different mediums should not be mixed.

Be able to model a chicken, rabbit and bowl.

Know pictures on outline.

Weave a rug with fringe on sides.

Know how to measure in inches.

GRADE II-B.

AIMS.

To encourage the use of drawing as a language. This includes "not only its use as a means of expressing thought but as a means of developing and shaping thought." This should be encouraged through the story telling interest, and through the interest in play.

To interest children in the sources of supply of the various commodities essential to our daily life, and the means of getting them to the family. This will be accomplished through Drawing, Construction, and Study of Pictures.

SUBJECT MATTER AND PROJECTS.

The big project for the autumn months will be making a down town street. This will show the classification of commodities which supply us with Food, Shelter, Clothing, Tools, Utensils and means of Transportation. The possibilities in the way of illustrations, discussions, design and construction are apparent, and should be introduced as the need arises in working out the project.

September and October.

Plan the street. What stores will be needed to supply the families in the community with food, shelter, clothing and utensils? Draw crayon illustrations of streets suggesting grocery stores, houses being built, cltohing stores, trucks waiting to deliver goods, etc.

Make the stores. If possible have the children bring soap boxes or some other small wooden box from home or from a grocery store. If this is not possible, use heavy cardboard, scoring and bending to form the two side walls.

Use one box for each store. Do not attempt fine intricate work. Keep the work free and easy, even though the results may look crude.

Divide class into groups, each group being responsible for one store. All children in the room should do the work. The group may arrange the things in the store, choosing what they wish from the total number in the room. Each group choose a leader.

Model fruits and vegetables for the store.

Make paper cylinders of construction paper for cans.

Make labels for the cans. This will include the use of crayons, water colors, and lettering.

Letter signs for the stores.

Make hats for the clothing store. Stands for the hats may be made by sticking wooden knitting needles in clay.

Cut doll sweaters out of pieces of wool cloth, shirts, waists and dresses, out of cotton. Discuss the sources of cotton and wool.

The shelter problem may be further illustrated by using one box for a house being built. Children represent piles of lumber, brick, mortar, tools, etc., in front of the building. Discussion of this will make a good language lesson.

Make charts of drawings and paper cuttings, illustrating the transportation of food supplies from the time they are planted until they come to the table. Children and teacher collect pictures and study them for the purpose of improving their drawings.

Make charts illustrating the tools and machinery used in planting, cultivating and harvesting some of the common foods.

Great care should be taken in the mounting of charts with regard to neatness and spacing.

Make boats that will stand, cutting sides double and using a little rectangular box for foundation. Box should be made on 16 fold, cutting off four squares. Make tugs, freighters, passenger boats, sail boats, etc., with which the children are familiar. Use colored construction paper for part of the boats to add color and make it more interesting to the children.

Start a color booklet of fruits, vegetables, birds, trees, flowers, illustrations and pictures. Use 12″x18″ paper. The aims in making the booklet are:

To teach children to recognize the six standard colors; violet, blue, green, yellow, orange and red.

To teach what is meant by light and dark color, dull color and bright color.

To teach children to hold crayon and brush correctly.

To teach complementary colors.

Cover design. Use construction paper for cover and a cut paper unit for the design. Use complementary colors or tones of one color, e. g., blue construction paper cover, black owl with orange eyes, or blue construction paper cover, black castle, orange windows.

Contents. The book should include the following in the order given, one page for each. The project may extend over the entire year:

Six standard colors in crayon arranged in a circle, with yellow at the top, red at the left, and blue at the right, with the other three between in the proper places. Make the circles about 2″ in diameter.

The same as above done with water colors.

Arrange samples of cloth to match the above.

Draw a house in three values of one color.

Draw a castle in three values of one color.

Draw vegetables, fruits and flowers.

Draw an illustration dealing with the food problem, e. g., public market; farm; gardening.

Draw shelters. (1) wigwam; (2) Eskimo house; (3) African hut; (4) house; (5) bird house; (6) dog house.

Illustration:

To further illustrate the clothing problem, draw a crayon illustration of children coasting or sliding—wearing woolen clothes, or a truck with the F. A. Patrick sign on it. Make illustrations of a cotton plantation, find a picture of a Klearflax rug and collect samples of silk cloth.

On one page, paste four samples of cloth and write these words under each: wool, cotton, linen, silk.

To further illustrate transportation, draw boats, wagons, air ships, etc.

Each month, put in this book the objects which have received drill during that month, e. g., action figures, animals, trees, etc.

November.

Study of Primitive Indian Life through selections from Longfellow's Hiawatha. How the Indians provided themselves with food, shelter, clothing, weapons, and utensils.

Projects:

Illustrate on the sand table the home of Hiawatha as described in Longfellow's Song of Hiawatha. Part III.

"By the shores of Gitche Gummee
By the shining Big Sea Water,
Stood the wigwam of Nokomis
Daughter of the Moon, Nokomis.
Dark behind it rose the forest
Rose the black and gloomy pine trees,
Rose the firs with cones upon them.
Bright before it beat the water;
Beat the clear and sunny water;
Beat the shining Big Sea Water," etc.

Model, draw, cut and construct wigwams and houses.

Cut and draw fir trees. After one lesson use this for seat work.

Learn to represent water and to plan a sky line.

Illustrate the house of Hiawatha, using crayons.

Model Indian bowls, starting with one lump of clay and shaping with the thumb.

Weave a small rug for play house.

Put Indian symbols on bowls. Use a blunt stick one-eighth of an inch wide and trace on damp clay. Learn several Indian symbols and their meanings.

Memorize the following:

"Painted many shapes and figures
Wonderful and mystic figures
And each figure had a meaning
Each some word or thought suggested."

(Art Education, Book V, page 70.)

Make an Indian booklet. This will include:

Drawings and cuttings of Indians, canoes, wigwams, pine trees, clay bowls, Indian weapons, symbols, etc. (Use for seat work as much as possible.)

Illustrations of scenes from Hiawatha.

Action figures of Indians fishing, hunting, cooking, canoeing, etc.

How did the Indian become acquainted with the white man?

Make a Mayflower of construction paper. (See general directions for constructed objects).

Cover a sheet of 12″x18″ drawing paper with a wash of blue.

Construct Plymouth Rock of brown or gray heavy paper.

Assemble these to show the landing of the Pilgrims. How did these first white people live?

Draw a picture of the first houses. A picture of these houses can be obtained from the Penny Print Company, Malden, Mass.

Construct houses out of heavy paper and make a street on the sand table.

Draw and construct a fort.

How did these people dress? Cut paper doll Puritans in characteristic costumes.

Illustrate Pilgrims going to church. For this use crayons at one time and paper cutting at another.

Make place cards for the Thanksgiving dinner.

December.

Christmas projects which will contribute to the Christmas festivities at home and at school.

Make standing Christmas trees. Use green construction paper. Trim like a real Christmas tree, using bright colored scraps of paper.

Make candy box. Use construction paper 9″x9″, folding on sixteen fold. Make a cover. Decorate the cover with a conventional Christmas three or some other simple design, e. g., candlestick. For the color combination in the box use tones of one color or the complementary colors.

Make a cut paper picture 9″x12″, illustrating a Snow Scene. Children who wish may make a calendar of this for a Christmas present for some one. Use gray and white with touches of bright colors.

Illustration: The crayon illustration work this month should be scenes suggestive of Christmas, e. g., bringing Christmas trees home on sleds, etc.

Illustrate the Christmas story on the sand table or ordinary table.

January.

Illustrate "The Story of Cinderella." Study Chapter I, II, pp. 32 to 46 in How Children Learn to Draw, and Chapter III in Fine and Industrial Art in Elementary Education, both by Walter Sargent, for point of view for the teaching of illustration.

Steps:

Tell the story to children.

Children illustrate with crayons.

Draw and make cuttings of castles, coaches, guards, pumpkins, and other objects which will help to illustrate the story.

Practice drawing people, using straight line figures and dressing them.

Illustrate the story again.

Teach the meaning of all over design and border and the use of a half inch ruler. Children make borders on 6"x9" drawing paper for seat work, using stick prints or crayons. All over designs may be made using units which have a meaning, e. g., tree, flowers, teacup, etc.

Pictures.

Mount the following pictures on 7"x10" gray mounting boards, presenting them during the month where they will meet a need in helping children to visualize:

Pilgrims Going to Church—Boughton.
Return of the Mayflower—Boughton.
The Buttery—Peter de Hoogh.
Don Carlos on Horseback—Velasquez.
Appeal to the Great Spirit—Dallin.
Boy With a Top—Chardin.
Passing of the Indian—Lorado Taft.
Alice—Chase.
Holy Night—Correggio.
Landing of the Pilgrims—Boughton.
The Return of the Gleaners—Breton.

STANDARDS OF ATTAINMENT.

Better illustration work should be expected than in the First Grade, but the main interest is still story telling, and the drawing will be crude.

Review the graphic vocabulary of Grade I and increase this by drilling on a few forms until the children can draw them quickly from memory.

Learn to draw coach, guard, dog, cat, birds and plants in Nature Study Course so that they show the markings and general characteristics, sailboat, tug and freight boat.

Be able to make a landscape or design using the complementary colors with white, gray or black.

Be able to recognize and draw five Indian symbols.

Know that when a picture is mounted the margin at the bottom should be a little larger than at the top.

Some originality in design in construction.

Weave a rug, weaving continuously.

Some idea of arrangement of pictures and furniture in the room.

Know pictures on outline.

Know how to measure in half inches.

Know how to model a bowl, Indian weapons and utensils; a castle and a canoe.

GRADE II-B, ENTERING IN FEBRUARY.

February.

Start a booklet to contain the semester's work, color work, fruits, vegetables, birds, trees, flowers, illustrations, pictures, action figures, etc. Use 12″x18″ paper. The aims in making the booklet are:

To teach children to recognize the six standard colors.

To teach what is meant by light and dark color, dull color and bright color.

To teach children to hold crayon and brush correctly.

To teach complementary colors.

To teach action figures and learn a few as accurately as letters of an alphabet to form a basis for future illustration work.

To learn a few forms used in illustration, Nature Study and Reading, so that they can be drawn well. This will add to the graphic vocabulary we aim to have the children acquire in each grade.

Cover design. Use construction paper for the cover and cut paper unit for the design. Use complementary colors or tones of one color, e. g., if the cover is made of blue construction paper the unit may be a black owl with orange eyes, a black castle with orange windows for lights.

Contents of the book should include the following in the order given, one page for each. This project may extend over the entire semester.

Draw Cinderella's coach.

Draw Cinderella's pumpkin.

Draw the castle where she went to the ball.

Draw mice.

Draw a guard at the castle door.

Draw action figures.

Each month put in this book the objects drilled on during the month.

Six standard colors in crayon arranged in a circle, with yellow at the top, red at the left, and blue at the right with the other three in the proper places. Make the circles or squares about 2 in. in diameter.

The same as above, done with water colors.

Arrange samples of cloth to match the above.

Draw vegetables, fruits and flowers.

Draw shelters, (1) wigwam, (2) Eskimo house, (3) African hut, (4) house, (5) bird house, (6) dog house.

Draw boats, wagons, air ships, etc.

Illustrate story of Cinderella. Study Chapter I, pp. 32 to 46, in How Children Learn to Draw, and Chapter III in Fine and Industrial Art in Elementary Education, both by Walter Sargent, for point of view for the teaching of illustration.

Tell story to children.

Children illustrate with crayons.

Draw and make cuttings, of castles, coaches, guards, pumpkins, and other objects which will help to illustrate the story.

Practice drawing people, using straight line figures and dressing them.

Illustrate the story again.

For seat work, illustrate stories of Lincoln and Washington, and other patriotic stories.

March and April.

Weave a rug using a frame loom. Draw simple design of stripes to form border. Color with crayons as nearly as possible the colors to be used in the rug when finished. Teach children to weave "continuously." By this we mean, when the woof gets to the edge, turn around and weave back to the other edge, one step in advance of the weaving of the First Grade, where they cut strips. Discuss the material used in the rug, where it comes from and the processes in preparing it for use.

Teach the meaning of all over design and border and the use of a half inch ruler.

Model a duck for a paper weight, being careful to get the air bubbles out of the clay so that it will stand firing. When finished the child should put his initials on the bottom of it. Arrangements will be made to have them glazed and fired at the High School.

Study of primitive Indian life through selections from Longfellow's Hiawatha.

How the Indians provided themselves with food, shelter, clothing, weapons and utensils.

Projects.

Illustrate on the sand table the home of Hiawatha, as described in Longfellow's Song of Hiawatha. Part III.

"By the shores of Gitche Gummee
By the shining Big Sea Water,
Stood the wigwam of Nokomis,
Daughter of the Moon, Nokomis.
Dark behind it rose the forest,
Rose the black and gloomy pine trees,
Rose the firs with cones upon them.
Bright before it beat the water,
Beat the clear and sunny water;
Beat the shining Big Sea Water," etc.

Model, draw, cut and construct wigwams.

Cut and draw fir trees. After one lesson use for seat work.

Learn to represent water and to plan a sky line.

Illustrate the house of Hiawatha, using crayons.

Model Indian bowls, starting with one lump of clay.

Put Indian symbols on bowls. Use a blunt stick one-eighth of an inch wide, and trace on damp clay. Learn several Indian symbols and their meanings.

Memorize:

"Painted many shapes and figures,
Wonderful and mystic figures,
And each figure had a meaning
Each some word or thought suggested."

Art Education, Book V, page 70.

Make an Indian booklet, including drawings, cuttings and illustrations of Indians.

How did the Indian become acquainted with the white man?

Make a Mayflower of construction paper. See directions for constructed objects. Illustrate on the sand table or ordinary table, "The Landing of the Pilgrims."

How did these first white people live?

Draw a picture of the first houses. Penny Print Company, Malden, Mass.

May and June.

Drill on six standard colors, dull and bright colors, and complementary colors. Call them color friends.

Paint twigs and wild flowers.

Drill on action figures again. Illustrate vacation activities.

Picture Study.

Don Carlos on Horseback—Velasquez.
Appeal to the Great Spirit—Dallin.
Boy With a Top—Chardin.
Passing of the Indian—Lorado Taft.
Pilgrims Going to Church—Boughton.
Alice—Chase.
Holy Night—Correggio.
Landing of the Pilgrims—Boughton.
The Return of the Gleaners—Breton.
Return of the Mayflower—Boughton.
The Buttery—Peter De Hoogh.

STANDARDS OF ATTAINMENT.

In illustration there should be an improvement made possible by the graphic vocabulary of Grade I. The illustrations will still be crude. The main interest is in telling the story by means of drawing so that the child is satisfied with his results.

The child's graphic vocabulary should be increased by learning to draw the following: Human figure, showing the

Be able to match three tones of one color in pictures and samples.

bend of elbows and knees, dog, cat, birds and plants in Nature Study Course; sailboat, tug and freight boat.

Be able to make a landscape or design, using the complementary colors with white, gray or black.

Be able to use more originality in construction than in Grade I.

Know that when a picture is mounted the margin at the bottom should be a little wider than at the top.

Better spacing in borders may be expected in this grade.

Be able to recognize and draw five Indian symbols.

The children should have some appreciation of the arrangement of furniture in a room.

Know how to measure in half inches.

Know and be able to tell something about the pictures planned for this grade.

GRADE II-A, ENTERING IN SEPTEMBER.

AIMS.

To encourage the use of drawing as a language.

To interest children in the sources of supply of the various commodities essential to our daily life, and the means of getting them to the family. This will be accomplished through drawings and construction.

SUBJECT MATTER AND PROJECTS BY GRADES.

The big project for the autumn season will be making a downtown street. This will show the classification of commodities which supply us with food, shelter, clothing, tools and utensils.

The possibilities in the way of descriptions, discussions, use of weights, measuring in inches and half inches, changing money, drawing with pencil, brush and crayons, design and construction are apparent, and should be introduced as the need arises in working out the projects.

September, October, and November to Thanksgiving.

Plan the street, what stores will be needed to supply the families in the community with food, shelter, clothing, and utensils. What material shall be used in their construction? How shall they be constructed? How shall the goods be displayed?

Make the stores. If possible, have the children bring soap boxes or other small wooden boxes from home or from a grocery store. If this is not possible, use heavy cardboard, scoring and bending to form the two side walls.

Write several headings on board as (1) builders, (2) furniture dealers, (3) grocery stores, (4) clothing stores, etc. Choose a leader for each, he, in turn, choosing his fellow workers. All the children will contribute to the stores but each group may assemble the things and have charge of its store.

Let one soap box represent a building being built. Tiles, shingles, lumber, piles of brick, ladders, tool boxes and tool shed stand around the building. Shingles and lumber may be made from strawberry boxes, tiles and brick from clay, tools out of clay or cut out of paper. Making of bricks can be made a good problem in measuring. Flatten clay one-half inch thick. Rule the clay in square inches. Cut bricks one inch by two inches. Put in the sun to dry. A sign placed on the tool shed will tell the names of the contractors. Rolls of paper put in the upstairs of the building, will show that the house is to be papered. Little cans of paint and paint brushes stand ready for the painters. A truck made out of heavy construction paper loaded with lumber stands by the building.

One box may represent a grocery store. Model fruits and vegetables for the store. Make paper cylinders of construc-

tion paper for cans. Make labels for the cans. This will include the use of crayons, water colors and lettering. Letter signs for the stores.

One box may represent a furniture store. Fold furniture, using 16 fold for basis.

One may represent a clothing store. Wooden knitting needles with clay standards may be used for the hats. Hats can be made out of colored paper. Use dark and light of one color or complementary colors. Sweaters made of wool cloth, waists, shirts, and dresses of cotton and linen, ties of silk may be made for the store. Discuss different kinds of cloth and where we get them.

Start a color booklet of fruits, vegetables, birds, trees, flowers, illustrations and pictures. Use 12″x18″ paper. The aims in making the booklet are:

To teach children to recognize the six standard colors: violet, blue, green, yellow, orange and red.

To teach what is meant by light and dark color, dull color and bright color.

To teach children to hold crayon and brush correctly.

The book should include the following in the order given, one page for each:

The six standard colors in crayon arranged in a circle with yellow at the top, red at left, and blue at the right, with the other three between in the proper places. Make the circles about 2″ in diameter.

The same as above is done with water colors.

Arrange samples of cloth to match the above.

Draw a house in three values of one color.

Draw lake, hills and a boat, making lake light blue, hills medium, boat dark.

Draw simple landscape in three values of green, e. g., sky, ground, one tree.

Illustrate dull color and bright color by drawing a carrot with green tops. Make the end of the carrot toward the top dull in color by putting a little blue crayon on it. Make a bright red apple. The dark side of the apple may be made by adding green.

Paint a red flower to illustrate the complementary color, red and green.

Draw or paint a bird or flower illustrating blue and orange.

Make a simple border, using the complementary colors violet and yellow.

Rule a page in half inches, and make an all over pattern. Let children choose the complementary colors they like best.

Make the face of a clock, using two or three values of brown. Place the hands at the time when school begins in the morning.

Do the same, using values of blue or green, placing hands at the end of the school day.

December.

The activities will naturally center about the preparations for the Christmas festivities. To emphasize the idea of giving, each child should make several useful things as well and as beautifully as he is capable of doing to present to some member of the family or to friends. The following are suggested. After the plan has been developed with children, allow them to make more than one for practice. This will provide profitable seat work.

Make a box like or similar to the following:

A candy box. Use construction paper 9″x9″, folding on sixteen fold. Make a cover. Decorate the cover with a conventional Christmas tree or some other simple design, e. g., candlestick. For the color combination use tones of one color or the complementary colors.

Make a cut paper picture 9″x12″ of a snow scene. Children who wish may put a calendar pad on theirs. Use gray and white with touches of bright colors.

Make standing Christmas trees. Use green construction paper. Trim like a real Christmas tree, using bright colored scraps of paper.

Illustration. The crayon illustrations this month should be scenes suggestive of Christmas, e. g., bringing Christmas trees home on sleds, etc.

Illustrate the Christmas story on the sand table or ordinary table.

January.

Illustrate The Town Musicians. Study Chapter I, pp. 32 to 46, in How Children Learn to Draw, and Chapter III in Fine and Industrial Art in Elementary Education, both by Walter Sargent, for point of view for teaching of illustration.

Steps:

Tell story to children.

Children illustrate with crayons.

Draw and make cuttings of donkeys, roosters, etc.

Practice drawing people, using straight line figures and dressing them.

Illustrate the story again.

Drill on the meaning of all over design and border and drill on use of half inch ruler.

Drill on action figures learned in previous grades. In addition in this grade they should learn to show the bend of elbows and knees.

Weave a rug on a frame loom. Draw design on manila drawing paper first. The design should be a simple pattern of stripes and the colors to be used in the real rug should be copied in the design. Try to make the rug design look like a rug. The weaving should show a greater degree of neatness than in Grade II-B.

Finish the term booklet.

Picture Study.

Review pictures learned in II-B.

Teach in addition:

The Buttery—De Hoogh.
In the Country—Lerolle.
The Sistine Madonna—Raphael.
Learning to Knit—Millet.
The Melon Eaters—Murillo.
The Blind Fiddler—Wilkie.
Boy With a Top—Chardin.

STANDARDS OF ATTAINMENT.

Drill on graphic vocabulary of II-B.

In addition learn to draw rooster and donkey.

The same standards of attainment may be expected in this grade as in II-B, with a greater degree of efficiency.

February.

Children construct little red school house. Put a flag on it. For this use red construction paper 9″x9″ and fold on 16 square.

Let the illustration work this month deal with patriotism, e. g., story of Washington, story of Lincoln, a patriotic parade, soldiers coming home, etc.

Children make soldier caps large enough to wear. For this use wrapping paper. Decorate with red, white and blue tassels.

Model a duck for a paper weight, being careful to get the air bubbles out of the clay so that it will stand firing. When finished the child should put his initials on the bottom of it. Arrangements will be made to have them fired and glazed at the High School.

March and April.

Drill on action figures taught in Grade I. In Grade II they should also learn to show the bend of elbows and knees.

To make use of this drill on action figures, illustrate the story "The Old Woman in the Shoe."

Illustrate "The Pied Piper," for seat work.

Illustrate "A fire," or some other theme which will require the drawing of people in action.

Illustrate "A parade," or "A street scene," or some other theme which will necessitate printing signs. Use straight line letters.

Use the Industrial Art Lesson one day for the mounting of pictures. Discuss which way they look best. Why? See special notice on mounting work.

Children arrange the furniture in the room. Discuss which way it will look best.

Draw birds, flowers and trees mentioned in Nature Study Course. Cut the same for seat work.

May and June.

Drill on six standard colors. Dull and bright colors. Complementary colors. Call them color friends.

Paint twigs and wild flowers.

Make a May basket. Use manila drawing paper 9"x9", and fold on 16 square. Some may use water color, some crayon, some stick prints. Teach the children that a real artist would not mix crayon and water color or stick prints and crayon, but would do it all with one kind of material.

Drill on action figures again.

Illustrate in crayon:

"How I Shall Spend My Vacation."
"What I Did Last Saturday."
"A Good Time."
"The Circus Parade."

Picture Study.

Review pictures learned in II-B.

Teach in addition:

Dignity and Impudence—Landseer.
In the Country—Lerolle.
The Sistine Madonna—Raphael.
Learning to Knit—Millet.
The Melon Eaters—Murillo.
The Blind Fiddler—Wilkie.
Boy With a Top—Chardin.
Don Balthasar Carlos on Horseback—Velasquez.

STANDARDS OF ATTAINMENT.

Drill on graphic vocabulary of II-B.

In addition, learn to draw rooster and donkey.

The same standards of attainment are expected in this grade as in II-B, but with a greater degree of efficiency. Please refer to Grade II-B.

GRADE III-B AND A.

AIMS.

The orderly expression of ideas through illustration, and through design and construction. Attainment in drawing should be more definte than in the first and second grades. The fact that children are more eager to secure finished results will justify more drill, though this should never interfere with the free and spontaneous expression of the child.

In as far as possible the activities have been planned in conjunction with Geography, History, Language, and Nature Study.

SUBJECT MATTER AND PROJECTS BY GRADES.

September. The French Child. Illustration.

As an introduction the children may tell stories about French people which their soldier brothers have told them and illustrate them with crayons. The teacher should encourage those who use originality in illustration, no matter how crude the results may seem. We wish above all else, to preserve the originality of the children; technique will come as they grow older. Encourage children to bring books about French children. They may take turns reading aloud to the class, then illustrating what has been read. After a Language and Geography lesson take time to illustrate certain parts with crayons. Children may study a lesson and illustrate at the same time during their study period. Wrong impressions can be corrected better in this way than in any other, for it gives the teacher an opportunity to see what each child is thinking about. The following are themes suggested for illustration: Carnivals showing gay costumes, people throwing confetti, blowing whistles, dancing, processions going up a hill, town crier, omnibus, peasant's home, buildings in a city, showing by windows that they contain many families, Lafayette and George Washington, stories of Joan of Arc, Christmas time, with shoes instead of stockings hung up by the fireplace, an American soldier with little French children talking to him, fishing and going to market.

Paint trees, flowers, and plants mentioned in Nature Study outline. The children should be required to show more careful study of joints, leaves and stems than in Grades I and II.

Review six standard colors, light and dark, complementary colors, and three tones of one color. In addition teach the color triads:

Red, yellow, blue.
Orange, green, violet.

One way to teach this is to show that it is the complementary colors with one of them broken up into the two colors

that make it, e. g., blue and orange are complementary colors. Blue, yellow, and red form the triad.

Begin a booklet on "Other Lands." See Booklet Making under Primary Handwork.

October. The Dutch Child.

Teach good placing of horizon to represent a flat country. Teach drawing of tulips, windmills, dog, geese, cart, and people in costume.

Design a border for the blackboard representative of Holland. If there is no cork board above the blackboard, strips of construction paper may be pasted together and pinned up across one end or side of the room. Do not paste units on the blackboard. Teach the children that artists do not mix mediums. If the border is paper cutting, there should be no lines drawn or painted. Keep this border in complementary colors, e. g., blue and orange. White, gray, or black may be used with the colors. Let the entire room have a part in the making of the border. Use only freehand cuttings.

Construct windmills. Dress dolls in Dutch costume.

Represent Holland on the sand table or ordinary table.

For illustration, some of the following themes are suggested: The Cheese Industry; A Dutch Home; The Fishing Industry; A Tulip Garden; The Leak in the Dyke by Phoebe Cary.

November. The Puritan Child.

Illustration. Drill on straight line figures of people. Dress figures as Puritans. Illustrate Puritans Going to Church; Watching for the Mayflower; Going Hunting, etc. The First Thanksgiving, Indians Coming to Talk with Puritans, etc.

Draw and construct a cradle, a fire place, a Puritan home. Dress Puritan dolls. Draw interior of a Pilgrim house, using a few lines.

Represent a Pilgrim village. A stockade may be made out of tan wrapping paper or construction paper. Houses, a store, and church may be made out of the same material. These may be made to look like logs by the use of charcoal lines. Cotton batting or white paper torn ragged may be used to represent snow.

Take down the Dutch border and make a similar one illustrating Pilgrim activities. This can be done by dividing the border into panels, having each panel represent a different phase of Puritan life, or the same units may be repeated. This should be entirely freehand work and all children in the room should have a part in it.

December. The Arabian Child.

Draw and cut camels, palm trees, and Arabian tents. Illustrate geography lessons for seat work, using colored crayons.

Take down the Puritan border and make a Christmas border, using the Arabian child or Christmas scenes for themes. For borders use paper cutting instead of crayon work, because it looks better and carries better at a distance. Do not mix mediums; make it all paper cutting.

Make a cut paper snow scene. The children who wish may put a calendar pad on theirs, and give it to some one at home for a Christmas present. If the white paper which represents snow is torn instead of cut it looks more like snow.

Represent the Christmas story on the sand table or ordinary table.

Make a pin square for a Christmas present. Cut two 3 in. squares out of cardboard. Backs of pads will do. Rule accurately in half inch squares. Bring pieces of plain unbleached muslin, scraps of linen or other plain cloth to school. Cut out two squares measuring 3½ inches. Place on either side of cardboard and overhand edges together. Finish with a stick printed design and pins. See Industrial Art Text Book No. 2.

January. The Eskimo Child.

Draw and cut Eskimo houses, dogs, seal, people, icebergs, white bear, etc.

Make an Eskimo border for the blackboard.

Illustrate stories about Eskimos.

Finish the term booklet. Paste in this book any lesson which correatles with Geography, Language or Spelling, or any pictures which help the child to appreciate all that is best in art, e. g., if the teacher or any of the children have little pictures of beautiful vases, buildings, bridges, etc., paste these on pad paper and write several simple sentences about them. Very interesting review spelling lessons may be conducted by taking words from the geography and illustrating each hurriedly in colored crayons.

Words which can be illustrated will have to be chosen, e. g., French flag, procession, town crier, peasant's home, city home, carnival, windmill, dog, geese, cart, Dutch children, tulip, fishing, Puritan, Mayflower, interior, Arabia, tent, camel, Eskimo, dog team, etc. This not only gives an excellent opportunity for concentration and drawing, but serves as a test of the semester's work in spelling.

As a review for the term, children may make little scenes of each country studied with colored crayons on small pieces of drawing paper, pasting these on pad paper. They may then write several sentences on each paper. This book may be made very attractive and a valuable way of correlating all the work.

February. The Swiss Child.

Begin to make a term booklet. For directions see Booklet Making under Primary Handwork, page 30. Teach the subject of Records in connection with the booklet problem. See Lesson on Paper, page 12. This booklet problem will extend over the entire semester.

Illustration.

Teach good placing of horizon to represent a mountainous country; draw pictures illustrating life in Switzerland, e. g., mountain climbers, goats, Swiss chalets, snow capped mountains with green slopes below with beautifully colored flowers growing along the paths, Swiss boy with a feather in his cap, skating on the little lakes of Switzerland, Swiss castles, railroads, bridges, etc. See Geography Course of Study.

Illustrate the story of William Tell. See How Children Learn to Draw. Pages 40-60. If possible play Victrola records of William Tell and explain to the children.

Model churns and Swiss chalets and other things which are typical of Switzerland. See Geography Course of Study.

Represent Switzerland on the sand table or ordinary table.

In addition to the study of Switzerland, children may illustrate stories of Washington and Lincoln, or some other patriotic theme.

March. The Negro Child.

Children make negro huts, such as are used in Africa. See Geography Course. Ask children if they can bring straw for the roofs, otherwise use raffia in the natural color.

Represent a negro village on the sand table or ordinary table. Palm trees may be made on the same principle as the standing Christmas trees. See Construction Problems for Primary Grades. Wood knitting needles stood up in empty spools with green paper at the top may also be used to represent palm trees.

Illustrate with crayons some of the following or any other themes suggested by the Geography Course of Study. A cotton plantation; Negroes gathering cocoanuts in Africa; Negroes picking cotton.

Construct log cabins such as Negroes had on some plantations. Represent a plantation on the sand table or ordinary table. Good cotton plants can be made out of small twigs attaching to them pink and yellow blossoms, green bolls, and ripe bolls.

If possible secure Victrola records of Negro melodies.

Tell the children in a simple way what Lincoln did for the slaves and how he got his inspiration when a boy.

In this study of the Negro, aim to develop a more kindly feeling toward the Negro, to teach the influence of a hot

climate upon our products and industries, e. g., cotton, and to show the influence of a hot climate upon the problem "How We Are Clothed." See Geography Course of Study.

Teach the use of one-quarter in. ruler. Give quick drill in this at the blackboard and on paper.

Give children opportunity to arrange furniture in the room; books, on front seats, plants, blackboard erasers and chalk, arranging flowers in dishes, adjusting shades, etc.

April. The Filipino Child.

Weave a rug using a loom with a heddle. Make a simple design of stripes, using manila drawing paper and colored crayons. Make it as nearly like the rug as possible in size and color. Teach the meaning of the words, loom, warp, woof, heddle.

Teach the children to observe the many things we use in our every-day life which are woven, and teach them as much as possible about weaving by the use of pictures, stories and other material. See Weavers and Other Workers by Jennie Hall.

Mount pictures in class occasionally, discussing the best ways of doing it; size of mount, margins, and use of paste.

Illustrate with colored crayons, scenes in the Philippines, e. g., palm trees, houses, hills, mountains, boats, etc. See Geography Course of Study.

May and June. Color. Study of Japanese and Chinese.

Finish the term booklet. Paste in this book any lessons which correlate with Geography, Language or Spelling, or any pictures which give the child a keener insight into the things about him, e. g., beautiful buildings, vases, statues, pictures, bridges, etc. As a review, children may illustrate the different countries studied this term and write about them.

Make a cut paper illustration of Japan, e. g., Mt. Fuji-yama, pine trees, house, boat, etc.

Illustrate Japanese festivals, methods of transportation, etc.

Weave a raffia tea mat. Use backs of pads. Cut circle about 6 in. in diameter by drawing around some round object. Make a hole in the center with a large darning needle and an odd number of holes about a half inch from the edge all the way around. Thread the loom with raffia. Begin at the center and weave round and round, going over one spoke, under the next, until the whole cardboard is covered. Weave in the same way on the other side of the cardboard. Cut the edge of the cardboard about a quarter of an inch from the edge. Over cast the edge with raffia. Strips may be woven into the mat, forming a border near the edge.

Represent Japan on the sand table or on an ordinary table.

Draw Japanese lanterns. Make this a problem in a graded series of hues, e. g., shading from orange to red; from blue to green, etc.

Make a Japanese lantern. Use a large sheet of drawing paper 9″x12″. Cut off a strip a quarter inch wide from one side. This is the handle. Cut off a strip 2 inches wide from one end. Save these strips to be used in making something else. Fold the large piece of drawing paper and cut in two pieces. Each piece should be $8\frac{3}{4}$″x5″. One of these pieces will form the outside of the lantern and one will be used for the lining. For coloring use water colors. Shade colors, e. g., yellow, orange, red; or use complementary colors, e. g., blue and orange. Paint lining a shade of color, or its complement. Run the colors together or paint designs which look Japanese. If possible, have some Japanese prints and symbols to show the children. Let children make Japanese letters, using brushes and charcoal gray or suggest Japanese trees or mountains on their lanterns. Paint the handle the color of the lining or the outside. Paste the lining and the outside together. Paste a strip of black paper at the top and at the bottom. Fold horizontally in the middle. Make vertical slits extending up to the black strip. Paste together. Put the handle inside, pasting it to the bottom of the lantern on each side and also to the top, thus keeping it from pulling vertically and stretching.

Drinking Cup for use on picnics in the summer. The purpose of this is to give the child a problem in accurate measurements and folding. Make it a dictation lesson. Use an 8″ square of tan wrapping paper. Fold diagonally. Place it on desk with fold towards you. Write the letter "b" in the right hand point. Write the letter "a" in the left hand point. Measure $4\frac{1}{2}$″ along the edge starting with "a." Place a dot. Write the letter "c" by the dot. Measure $4\frac{1}{2}$″ along the edge starting with "b." Place a dot. Write the letter "d" beside the dot. Fold "a" over on "d." Fold "b" over even with "c" on the opposite side. Slip lap into pocket on each side. Practice until all can make good cups.

Devote all of June to water colors. Paint branches of trees, tulips, dandelions, cowslips, etc. Make green by putting yellow on the paper and dropping blue into it. Make orange out of red and yellow, and brown out of blue, red and yellow in the same way.

Construct a Seed Box.

This box is to be kept in the school room until school closes. Have children bring soil to put in them, plant a few seeds, place them in the windows and watch them grow. When school closes in June, take them home and put box in the ground. Let the first lesson on this seed box be

one of making a hurried sketch of the box at the board without a ruler. Have this sketch of the box as it looks before the sides are turned up. Explain to the children that this is the way a designer of aeroplanes, steam engines, chairs, tables, etc., always begins, by making hurried sketches so that he can tell which he likes better. Let the children choose which shape they like best, square or rectangular, and whether the sides shall be high or low. The teacher may decide between one of two ways of finishing this problem.

If the number of children in the room is small or if the children have been used to working out things in their own way, they can make their own designs for the box.

In a large room the teacher may let them vote as to whether the box shall be square or rectangular and have all children make it the same size. Cut several thicknesses of card board the size of the bottom and put in to make it firmer.

Picture Study.

Lion of Lucerne—Thorwaldsen.
Learning to Knit—Millet.
School in Brittany—Geoffrey.
Children of the Shell—Murillo.
Les Meninas—Velasquez.
Landscape with Mill—Ruysdael.
Boy With a Top—Chardin.
The Thatched Cottage—Corot.
Boy With the Sword—Manet.
Landscape with Cattle—Cuyp.
Dordrecht—Van Goyen.
Nurse and Child.—Franz Hals.
Sphynx, Pyramid and Desert.
Repose in Egypt—Cranach.
Joan of Arc—Ann Hyatt.
Passing of the Indian.—Lorado Taft.

STANDARDS OF ATTAINMENT.

Illustration.

There should be a decided improvement because of the systematic drill on forms in Grades I and II. The effect of distance, action and details which contribute to the pictures can be shown better.

Graphic Vocabulary.

Human figure

Animals and birds. Be able to draw a horse, a cow and a sheep. Draw birds in Nature Study Course. In this grade the children should be able to draw the bills, feet, etc., more accurately.

Plants. Represent plants and trees in Nature Study Course. More detail and careful work should be expected.

Constructed forms: Boxes, churns, chalets, windmills, jinrikishas, etc.

Design.

Know that a picture should be mounted so that the margins on the side are equal to or smaller than the top, and the bottom margin a little larger.

Be able to make borders with design units taken from study of different countries, e. g., churns of Switzerland.

Be able to make end papers for a book using an all-over pattern.

Ability to make well spaced borders and surface patterns by free hand repetition of units.

Ability to adapt familiar forms to a pattern.

A better sense of arrangement of things in the room should be expected in this grade.

A better use of color in design.

More originality in design in construction work.

A better arrangement of objects and people in compositions.

Color.

In addition to the color work of the previous grades they should know the color triads. (a) red, yellow and blue; (b) orange, green and violet.

Picture Study.

Know all the pictures given and be able to talk about them.

GRADE IV-B.

AIMS.

The problems in this grade must be more specific and more provision made for drill. Concentration upon the same problem in different forms until the fundamental processes become a habit is of the greatest importance. The child at this time becomes dissatisfied with his crude attempts and is eager to make things "look right." He must be shown definitely how to do this.

The specific aims are:

To develop initiative and power to think through a problem in construction before shaping the material for final construction.

To teach children how to represent general proportions correctly and encourage them to draw at home in order to gain greater facility.

To teach children how to search out and assemble material on a world industry, e. g., Paper and Paper Products.

To teach the intelligent use of color adapted to the abilities of children of this age.

To teach what is meant by center of interest in a picture, how a few great artists have expressed this in their pictures and how the children themselves may express it.

SUBJECT MATTER AND PROJECTS.

September. Color.

Paint flowers in full color, using a well charged brush allowing colors to blend on the paper.

Paint trees in autumn coloring. Learn to see that shadows are violet.

Paint an autumn landscape showing sky, ground and one tree.

Recognize, name, and be able to match the six standard colors; violet, blue, green, yellow, orange and red.

Know and be able to use terms; hue, value, intensity and complementaries.

October. Design and Construction.

Make a Duluth booklet.

This project necessarily involves correlation of Language, Geography, History, Nature Study and Industrial Art. The children should begin planning for it in September. It will include collecting, arranging, and mounting materials in accordance with the principles of design, planning and lettering a suitable and attractive cover, and making the book. The plan should be developed step by step through experimentation rather than from dictation.

Plan the booklet a suitable size to hold the paper provided for the written work in all school subjects.

The book, including the sewing and cover design, must be finished in October, but the assembling of the contents will continue throughout the entire semester.

Materials.

Construction paper 18″x14½″ for cover.

Two sheets of manila drawing paper 8¾″x7″ for fly leaves.

Large needle and thread.

Steps in Construction.

Fold cover paper into four parts by folding bottom to top and left to right.

The folds of the book should be on the left side and at the top.

Unfold cover and sew stubs through one thickness of the cover so that the sewing will not be seen on the outside of the cover.

Plan the cover, including the name of the book and a simple unit suggestive of the contents of the book. As a help in securing good spacing of title and unit, cut strips of paper and move them about on the book cover, comparing and criticizing until satisfactory results are secured.

From these strips of paper cut plain thick capital letters not more than 1½″ in height for the title and not more than ¾″ in height for the name of the maker. The first name of the child is all that need appear on the cover.

The front fly leaf may be used as the title page. Use the letters cut for the cover as patterns to trace around for the lettering on the title page.

Use dark colored construction paper for the cover, and cut the letters from manila drawing paper, on a light shade of the same color as the cover.

To secure even spacing, rule a light line on the cover and paste letters on this line. The line may be erased with a soft eraser after the paste is dry.

November. Illustration.

Illustration of History, Geography and Language themes. To prepare for this, teachers are asked to read carefully the chapter on Illustration of Themes in "How Children Learn to Draw," by Sargent and Miller; Type Lesson on the "Triumphal Procession of Columbus to the King's Court," page 22

Choose a story or poem in which there are several subjects which lend themselves to illustration. Proceed step by step as indicated in the type lesson. Bring out the point that the best final results will be secured by those who practice most on the drawing of the different objects which are to make up the composition. Encourage children to draw at home, telling them how an artist makes many preparatory sketches before attempting the real picture. These preliminary sketches may

be done with the pencil but the finished illustration should be done with colored crayons.

December. Design and Construction.

Construct a box to hold a ball of twine.

Preliminary Steps.

Children take a box apart to see how it is put together.

Children make rough working drawings of the box on the blackboard to procure relative dimensions considering the size of a ball of twine.

Final Steps.

Make a complete working drawing of the box. Use rulers and sharp pencils.

Draw six 3″ squares on the mounting board for the faces of the box.

Make the box from a piece of 12½″x9″ mounting board.

After cutting on the heavy lines and scoring on the dotted lines, fold the box.

Cut twenty-four 3″x3″ strips of construction paper for binding the edges.

Cut a unit which will fill the space well and paste one on each face of the box.

The half-inch lap on the cover is to be inserted on the inside of the box to hold the lid tight. Punch a hole in the center of the lid through which the end of the ball of twine may be passed.

January. Design and Construction.

Model a clay bowl, a boat and a bridge.

For modeling a lake freight boat, provide each child with a piece of clay about the size of an orange. Model it into an oblong box shape and pull out the two ends until they are long and narrow to make the prow and stern of the boat. Scoop out the center, leaving the part for the pilot house on the front and the cabin and smokestack at the back. This will avoid sticking on small pieces which will break off easily when the clay is dry. Tooth picks may be used for the flag pole and mast. For all clay modeling the thumb is the best tool.

Clay Bowl. After the children have studied the Indians of Duluth, collected pictures of Indian bowls and make a collection of real bowls of their own, they are ready to model one themselves. A piece of clay about the size of an orange should be provided for each child. Paper designs showing the shape of the bowl and a border having a motive significant of Duluth will have been made previous to the modeling of the bowl. Each child should have the paper pattern of his bowl and a circle showing size of the bottom of the bowl on his desk before starting to model. Starting with small pieces of clay and working them together with the thumbs, build the

bottom of the bowl a little less than half an inch thick. Roll out a coil one-half inch thick and long enough to go around the bowl. Use the flat palm of the hands for this. Three coils about the thickness of the little finger will build the sides. The first coil should be laid on top of the bottom and near the edges and must be pulled to overlap each successive coil with the thumb, and not pinched together with the fingers. All air spaces must be worked out or the bowls will not stand firing. When the bowl is leather dry, decide where the borders are to be placed and trace on the clay with a blunt stick. This should first be traced on a strip of thin paper the circumference of the bowl, placed around the bowl and incised into the clay through the paper. When finished, pull off the paper and with a blunt stick make the path around the design about one-eighth inch thick and one-eighth inch wide. If too narrow and shallow the space will be filled up with glaze and the design lost. The initials of the pupil and name of the school should be worked into a design and traced on the bottom of the bowl.

See Winslow and Gompf, pp 13-15, for content.

Picture Study.

The following pictures should be carefully mounted early in the year and used not only to supplement the subject matter but for definite lessons in appreciation. Children should become familiar with a few of the great works of art in architecture, sculpture, and painting and know in a simple way why they are worth knowing. They should know what is meant by center of interest, balance, good drawing and grouping of objects and people, and harmonious combinations of color. See Type Lesson on Fog Warning by Winslow Homer and general bibliography on Picture Study.

Fog Warning—Winslow Homer.
Syndics of the Cloth Guild—Rembrandt.
Boy With the Torn Hat—Thomas Sully.
Alice—William Chase.
Lost—Schenck.
The Minute Man—Daniel French.
Statue of Black Hawk—Lorado Taft.
Statue of Abraham Lincoln—St. Gaudens.
Colosseum—Rome.
Parthenon—Athens.
Capitol at Washington, D. C.
Minnesota State Capitol—St. Paul.
Mt. Vernon—Virginia.
The Court House—Duluth.
The High School—Duluth.
The Public Library—Duluth.

STANDARDS OF ATTAINMENT.

Be able to draw:

A square and rectangular box in any position.

A flower, weed, tree and landscape with the brush.

The side view of a truck.

The side and end view of a street car.

A freight boat.

Action figures to be used in illustration.

To be able to illustrate a lesson in geography, reading, or history using crayons or paper cutting.

Be able to:

Recognize, distinguish and match the six standard colors, and the intermediate colors, such as blue green, yellow green, etc.

Define and illustrate the terms hue and value.

To know what colors to put together to make a poster or other picture.

Be able to:

Illustrate a story.

Be able to:

Make simple working drawings of a constructed object such as a box or a bowl.

Construct a simple cubical box.

Model a clay bowl and a freight boat.

Plan and make a book with stubs sewed with three-hole sewing, collect, assemble, and mount material for the book.

Talk or write about the pictures outlined for this grade.

GRADE IV-A.

AIMS.

More concentrated effort on problems in Drawing and Construction, more emphasis upon truthful representation and more exact proportions, greater accuracy in the direction of slants and outlines of shapes, and more skill in the manipulation of materials, such as modeling in clay and pasting with neatness and precision are expected in this grade. To learn how different races of people have solved the problems related to Food, Shelter, Clothing, Utensils, Tools, Machinery and Transportation. To learn how to search out and assemble material on a World Industry, such as Clay and Clay Products.

SUBJECT MATTER AND PROJECTS.

February. Design and Construction.

To learn through experimentation, how to make a booklet for material collected on the study of Clay and Clay Products. This will include pictures, drawings, and themes, carefully selected and mounted according to the principles of design.

Materials.

Construction paper $14\frac{1}{2}$″x18″ for cover 7″x$8\frac{3}{4}$″.
Two sheets of manila drawing paper for fly leaves.
Pad paper cut in 8″x$1\frac{1}{2}$″ strips for the stubs.
Large needle and thread.

Steps in construction.

Fold cover paper into four parts, bottom to top and left to right.

The folds of the book should be on the left side and at the top. Unfold cover and sew stubs through one thickness of the cover so that the sewing will not be seen on the outside of the cover.

Plan the cover, including name of the book and a simple unit suggestive of the contents of the book. As a help in securing good spacing of title and unit, cut strips of paper and move them about on the book cover, comparing and criticizing until satisfactory results are secured.

From these strips of paper cut plain thick capital letters not more than $1\frac{1}{2}$″ in height for the title and not less than $\frac{3}{4}$″ in height for the name of the author. The first name of the child is all that need appear on the cover.

Use the front fly leaf as title page. Save time by using letters cut for the cover as patterns for the lettering on the title page.

Use a dark colored construction paper for the cover and cut letters from manila drawing paper of a lighter shade of construction paper.

To secure even spacing rule a light line on the cover and paste letters on this line. The line may be erased with a soft eraser after the paste is dry.

The book will be made of a size suitable for the paper provided for the written work in all school subjects. The drawing paper must be cut the same size.

Although definite measurements are given for the booklet the children should work them out for themselves rather than having them dictated. The book, including the construction, sewing and cover designs must be finished in February, but the collecting and assembling of the contents will continue throughout the semester.

March. Illustration of Themes.

To learn how to illustrate history and language themes. In preparation for this teachers are asked to study the chapter on Illustration of Themes in How Children Learn to Draw, by Sargent and Miller, and the Type Lesson on the Triumphal Procession of Columbus to the King's Court, in this course of study. Choose a story in which there are several themes suitable for illustration, each child choosing the one he would most like to illustrate. Make a list of the drawings necessary in order to make a good picture and begin practicing. In this grade too much emphasis cannot be placed upon drill consistent with the pupil's interest. Encourage home work by putting sketches up where they can be seen by all. Tell pupils how illustrators, architects and sculptors make many preliminary sketches in preparation for the finished piece of work. Save a series of lessons showing the development. It will show the progress and will be encouraging to pupils and teachers. Use colored crayons for the final composition.

April. Design and Construction and a Study of Clay and Clay Products.

Model a paper weight out of clay. The aim of this series of lessons is to teach children something about Clay and Clay Products as a world industry and give them experience in transforming raw material into a finished product. See special notice on Clay. The paper weights that are well done will be fired in the High School kiln. Children choose an animal which is solid and compact in character like a frog, rabbit or turtle, and practice drawing it from both a side and front view, indicating only the general shape of the animal. Provide each child with a piece of clay about the size of an orange. The clay must be well packed together and all air spaces worked out, or it will break when fired in the kiln. See Pottery, pp. 13-14, in The Industrial Arts in Elementary Education by Winslow and Gompf, also general

bibliography for subject matter. Teachers should work out this problem before attempting to develop it with a class.

May and June. Color.

Finish booklet on Clay and Clay Products by June 1.

Paint flowers in color, applying with a full brush and plenty of water, allowing colors to blend on the paper. Practice trees in autumn coloring. Shadows are purple. Paint an autumn landscape, showing sky, ground, and one or more trees. Be able to name, match and use the six standard colors: violet, blue, green, yellow, orange and red. Define and be able to use terms hue, value, intensity, complement and triad.

Picture Study.

The following pictures should be carefully mounted early in the year and brought out from time to time to supplement the subject matter and for lessons in appreciation. By the end of the semester children should be intimately acquainted with them and be able to give one minute talks on each. See Type Lesson—Fog Warning by Winslow Homer and general notice on Picture Study. The Fifth Grade list of pictures is longer than that of some of the other grades for the reason that there are so many pictures by our early American artists which will supplement the History Course for this grade. We believe teachers will find this of great advantage in helping children to picture early American history.

Columbus at the Court of Ferdinand and Isabella—Brozik.
Land of Columbus—John Venderlyn.
The Puritan—St. Gaudens.
Landing of the Pilgrims—Boughton.
Pilgrims Going to Church—Boughton.
Return of the Mayflower—Boughton.
Penn's Treaty with the Indians—Trumbull.
Lafayette Memorial—Daniel French.
Capitol at Washington, D. C.
Parthenon—Athens, Greece.
Colosseum—Rome, Italy.
Bell Tower by Giotto—Florence, Italy.
Rheims Cathedral—Rheims, France.
Westminster Abbey—London, England.
Syndics of the Cloth Hall—Rembrandt.
The Angelus—Millet.
The Harvest—Lhermitte.
School in Brittany—Geoffrey.
Landscape with Mill—Ruysdael.
Aesop—Velasquez.
Les Meninas—Velasquez.
Children of Charles I—Van Dyck.
Repose in Egypt—Cranach.

STANDARDS OF ATTAINMENT.

Be able to draw:

A square and rectangular box in any position.

A flower, weed, tree and landscape with the brush.

The side view of a truck.

The side view of a street car.

A freight boat.

Action figures to be used in illustration.

To be able to illustrate a lesson in geography, reading, or history, using crayons or paper cutting.

Be able to:

Recognize and distinguish the six standard colors, and different intensities, blue, violet, red violet, etc.

Define and illustrate the terms hue, value and intensity.

Distinguish between values of a given hue and intensities of a given hue.

Be able to:

Construct a simple cubical box.

Model a clay bowl and a freight boat.

Make a paper covered book having stubs sewed with three-hole sewing.

Be able to:

Recognize and give a one minute talk about the pictures outlined for this grade.

Be able to:

Talk or write about Clay and Clay Products as a World Industry.

Be able to:

Illustrate stories in color.

GRADE V-B.

AIMS.

To develop initiative and the ability to think independently through a problem in construction before shaping the material for final construction. The ability to make freehand working drawings of simple constructed objects, such as a box or a book, and to understand something about the relation of design to constructed objects.

The ability to search out and assemble material in booklet form on the subject of Transportation.

To be able to use water colors intelligently, consistent with the abilities of Fifth Grade children.

Inasmuch as this is the time when greater technical skill is needed and when children are eager to acquire it, encouragement to draw at home should be given.

The ability to analyze the pictures assigned to this grade from the standpoint of the fundamental principles of composition and design.

SUBJECT MATTER AND PROJECTS.

September. Color.

Make a color chart of samples of cloth, paper, pressed leaves, etc., illustrating the three color qualities, hue, value, and intensity. Arrange them on a chart of chip board 22"x28" in an orderly way. After the terms hue, value and intensity, and the purpose of the chart have been explained have pupils draw up plans for arrangement of samples and choose the best one, each child contributing something to the finished chart. This problem should extend over the entire month.

Paint weeds, grasses, and single flowers in silhouette and in color. Choose specimens which are decorative in character and work for interesting placing on the paper and for truthful representation. Give special attention to growth by noticing joints, slant of main stem and direction of branches. The brush should be well charged with paint and held by the end of the handle.

Paint an autumn landscape, showing sky, ground and one tree. First practice single trees.

October. Design and Construction.

Design and make a booklet for material collected on the subject of Transportation. The book, including the sewing and cover design, must be finished in October but the assembling of the contents will continue throughout the semester. Try to stimulate good natured rivalry as to who shall make the most interesting book. Exchanges between Fifth grades of different buildings will be arranged. The project naturally involves correlation of Language, Geography, History, Nature Study and Industrial Art, and includes collecting,

arranging and mounting materials in accordance with the principles of design, planning and lettering a suitable and attractive cover, and the technical processes of making the book, viz.: measuring, folding, assembling, sewing and pasting.

The plan for the book must be developed step by step through experimentation rather than through dictation, though it will readily be seen that the books must be uniform in size when finished. It is planned to fit the paper provided for written work in all school subjects. When drawings are to be placed in the book the paper must be cut the same size as the writing paper. Drawing paper should be used for mounting pictures for the book.

Materials.

Two pieces of mounting board 8¾"x7¼".

Two sheets of heavy brown wrapping paper 18"x7¼" for cover paper and end papers.

Two sheets of manila drawing paper 8¾"x7" for fly leaves.

One strip of black construction paper 7¼"x2" for binding the fold of book.

Several strips of pad paper cut into 7¼"x1½" pieces for stubs.

Needle and thread.

Steps in Construction.

Each pupil should have a folded newspaper on his desk. As the top layer becomes sticky with paste it should be removed and discarded. This will keep the work clean. Apply paste (Adhezo) to the two pieces of mounting board and place them on one of the 18"x7¼" pieces of heavy brown wrapping paper, leaving one-half inch between the two pieces of mounting board. Place a clean piece of newspaper over this and rub thoroughly with a ruler. Be sure there are no bubbles where the paste has been rubbed down.

Paste the other piece of wrapping paper on the outside for the cover paper.

Put book under press and leave until thoroughly dry to prevent warping.

Fold the stubs and mark as follows for three-hole sewing: one inch from each end of the stub and in the middle.

Sew the stubs through the fold of the book on the left and paste the piece of black construction paper 7¼"x2" over the fold to hide the sewing and bind the book.

Plan the cover, including the name of the book, name of the author and a simple unit suggestive of the contents of the book. As a help in securing good spacing, cut out strips of paper for the lettering and unit and move them about on the cover, comparing and criticizing

until satisfactory results are secured. Print plain capital letters upon these strips and transfer to cover by blackening the back of the strip with a soft lead pencil and tracing with a hard, sharp pencil. Make lettering pens of 3/16" dowel sticks and go over the letters with India ink.

November. Illustration.

Illustration of History and Language themes.

In preparation for this, teachers are asked to study Chapter I on The Illustration of Themes, in How Children Learn to Draw, by Sargent and Miller, and study the type lesson on "The Triumphal Procession of Columbus to the King's Court." By this time the class will be ready to choose themes in later American History which lend themselves to illustration. Begin collecting material and practice drawing people, objects, etc., needed to make a successful illustration. This will be an excellent place to encourage drawing at home. Put these drawings on the bulletin board and label "Drawn outside of School." Save all preliminary and preparatory sketches for comparison and encouragement. The class may be divided into two groups, each group working up a different illustration or all may work on the same one. Two finished illustrations should be made by each pupil during the month.

December. Design and Construction.

Design, Construction, and further study of Transportation.

To learn through experimentation how to plan and make a box for handkerchiefs. This will include a surface pattern made with stick prints for the covering of the box.

Steps in covering a box:

Ask the children to bring boxes to school to be covered. Candy boxes, small tin boxes, cracker boxes, and cigar boxes are good for this purpose.

Design all-over patterns, using stick prints for the cover paper for the boxes. Repeat this unit for the all-over pattern. First, practice with the stick prints on drawing paper until the best spacing is secured, then make the design on construction paper cut from $\frac{1}{8}$" to $\frac{1}{4}$" narrower than the faces of the box to be covered. Children may square paper lightly with pencil to keep the design straight or the ruler may be held as a guide in placing the sticks used for the design. Simple units well spaced are more satisfactory than elaborate patterns. Apply paste evenly and smoothly, place in position on faces of box and rub thoroughly through a piece of newspaper.

Making a box.

Pupils decide from the size of a pair of gloves the general proportions of the box.

Make rough working drawings of the box on the blackboard. Some may bring boxes and take them apart to see the construction.

Make a complete working drawing with rulers on 9″x12″ drawing paper, showing the dimensions. Draw to scale $\frac{1}{2}$″ to 1″.

Materials and steps in construction. (The following directions are not to be dictated to the children but are intended as a guide to the teacher in developing the lessons):

Light weight chip board 6″x11$\frac{1}{2}$″ for bottom of box and 11$\frac{1}{4}$″x5$\frac{3}{4}$″ for the cover.

Construction paper cut into strips $\frac{3}{4}$″ wide to bind corners and edges of box.

Draw plans accurately with sharp pencils on chip board.

Cut on lines————————.

Fold on lines..... Score all folding lines with a knife.

After the box is made, cover it with stick printed cover paper in the same way as the boxes brought from home were covered.

See Industrial Art Text Book No. 6, pp. 16-17.

January. Perspective.

To learn to make truthful representations of constructed objects. See How Children Learn to Draw, pp. 175-209. To learn how to use the pencil to produce texture, distance, construction, etc. See Care and Use of Material.

Draw a square and oblong box in any position, using "key lines."

Draw a milk wagon, a boat, a truck, and a store, starting always with "key lines."

Use 9″x12″ drawing paper and make drawings large enough to look well on the paper. Avoid harsh, heavy lines of even character.

Study Chapter V, Fine and Industrial Art in Elementary Education, by Walter Sargent.

Picture Study.

By the end of the semester, children of the Fifth Grade should be able to give three-minute talks on the following pictures. For plan of conducting the lesson, see special notice on Picture Study. It has been the aim to present examples of painting, sculpture and architecture which will supplement

the study of history. If introduced at the right time they will be received with interest and enthusiasm.

Washington Crossing the Delaware—Leutze.
The Minute Man—Daniel French.
Nathan Hale—Frederick MacMonnies.
Declaration of Independence—Jonathan Trumbull.
Lafayette Memorial—Daniel French.
The Emancipation Proclamation—Carpenter.
Admiral Farragut—Augustus St. Gaudens.
General Sheridan—Augustus St. Gaudens.
Shaw Memorial—Augustus St. Gaudens.
Statue of Lincoln—Augustus St. Gaudens.
The Capitol at Washington.
Congressional Library—Washington.
Independence Hall—Philadelphia.

STANDARDS OF ATTAINMENT.

In Drawing.

Be able to draw:

Boxes in any position, a store, a boat, a milk wagon.
An automobile truck.
Action figures.
A weed, flower, tree and landscape with the brush.

In Design.

Be able to design:

A unit and repeat it to form a border and an all-over pattern to cover a box.

A booklet cover having a title, author's name, and unit.

Construction.

Be able to:

Construct a box.
Make a booklet having a cardboard cover and stubs.

Color.

Be able to:

Recognize, name, and match the six standard colors: red, orange, yellow, green, blue, and violet, three intensities of each, and three values of each.

Define and use the terms hue, value, intensity, complement and triad.

Illustration.

Know how to look up reference material, make sketches and notes in preparation for illustrating a story and illustrate the story.

Picture Study.

Know the ten pictures assigned to this grade and give two-minute talks about each.

In Industrial Education.

Be able to trace the evolution of Transportation from primitive examples to those of the present day.

Be able to trace the principal railroad trunk lines of North America.

Know the leading steamship lines which ply between North America and the other continents.

GRADE V-A.

AIMS.

The aims are the same as for the B Fifth Grade with the exception that Records is the industrial subject to be studied.

SUBJECT MATTER AND PROJECTS.

February. Design and Construction.

Design and make a booklet for material collected on the subject of Records, including Paper and Paper Products. The collecting and assembling of the contents of the book will extend over the entire semester but the book itself, including the cover design, must be finished in February. The project involves correlation of Language, Geography, History, Nature Study and Industrial Art, arranging and mounting materials in an orderly way considering margins, spacing and pasting, planning and lettering a suitable and attractive cover, as well as the technical processes of measuring, folding, assembling, sewing and pasting.

The plan for the book must be developed step by step through experimentation rather than through dictation, though it will readily be seen that the books must be uniform in size when finished. It is planned to hold the paper provided for written work in all school subjects. When drawings are to be placed in the book the paper must be cut the same size as the writing paper. Drawing paper should be used for mounting pictures for the book. Read Gabriel and the Hour Book, by Aveleen Stein.

Material.

Two pieces of mounting board $8\frac{3}{4}''$x$7\frac{1}{4}''$.

Two sheets of heavy brown wrapping paper $18''$x$7\frac{1}{4}''$ for cover paper and end papers.

Two sheets of manila drawing paper $8\frac{3}{4}''$x$7''$ for fly leaves.

One strip of black construction paper $7\frac{1}{4}''$x$2''$ for binding the fold of book.

Several strips of pad paper cut into $7\frac{1}{4}''$x$1\frac{1}{2}''$ pieces for stubs.

Needle and thread.

Steps in construction.

Each pupil should have a folded newspaper on his desk. As the top layer becomes sticky with paste it should be removed and discarded. This will keep the work clean. Apply paste (Adhezo) to the two pieces of mounting board and place them on one of the $18''$x$7\frac{1}{4}''$ pieces of hevay brown wrapping paper, leaving $\frac{1}{2}''$ between the two pieces of mounting board. Place a clean piece of newspaper over this and rub thoroughly with a ruler. Be sure there are no bubbles where the paste has been rubbed down.

Paste the other piece of wrapping paper on the outside for the cover paper.

Put book under press and leave until thoroughly dry to prevent warping.

Fold the stubs and mark as follows for three-hole sewing: One inch from each end of the stub and in the middle.

Sew the stubs through the fold of the book on the left and paste the piece of black construction paper $1\frac{1}{4}$"x2" over the fold to hide the sewing and bind the book.

Plan the cover, including the name of the book, name of the author and a simple unit suggestive of the contents of the book. As a help in securing good spacing, cut out strips of paper for the lettering and unit and move them about on the cover, comparing and criticizing until satisfactory results are secured. Print plain capital letters upon these strips and transfer to cover by blackening the back of the strip with a soft lead pencil and tracing with a hard, sharp pencil. Make lettering pens of 3/16" dowel sticks and go over the letters with ink.

March. Design and Construction.

Design, construction and continuation of study of Paper and Paper Products, especially boxes. If possible visit the Box Factory.

To learn through experimentation how to plan and make a box for gloves or handkerchiefs. This includes a surface pattern made with stick prints for the covering of the box.

To learn how to make paper. See Winslow and Gompf.

Steps in covering a box.

Ask the children to bring from home a box which they would like to re-cover. Candy boxes, small tin boxes, cracker boxes, and cigar boxes are good for the purpose. Cut pieces of construction paper a little narrower than the faces of the box. Use rulers and work for accuracy. Practice making a surface pattern with stick prints until a satisfactory unit and spacing are secured, then print on the pieces of construction paper. The children may square the paper lightly with pencil to keep the design straight or the ruler may be held as a guide. Simple units well spaced are more satisfactory than an attempt at elaborate patterns. Apply paste evenly and smoothly, place in position on faces of box and rub thoroughly through a piece of newspaper.

Making a box.

Take a box apart to see how it is constructed. Decide upon the proportions of the box to be made. Its use will determine this.

Make working drawings to scale $\frac{1}{2}$" to 1", showing complete plans for the box. Use 9"x12" drawing paper

and make plans accurately, using sharp pencils. The following plans are not to be dictated to the children but are intended as a guide to the teacher in developing the lesson:

Light weight chip board 6″x11½″ for bottom of box and 11¼″x5¾″ for the cover.

Construction paper cut into strips ¾″ wide to bind corners and edges of box.

Draw plans accurately on chip board, using sharp pencils.

Cut on lines————————.

Fold on lines..... Score all folding lines.

After the box is made, cover it with stick printed construction paper in the same way as boxes brought from home were covered.

See Industrial Art Text Book No. 6, pp. 16-17.

April. Illustration.

Illustration of Language and History themes. Read Chapter I, in How Children Learn to Draw on The Illustration of Themes, and study type lesson on "The Triumphal Procession of Columbus to the King's Court." Choose themes from the History of Greece and begin collecting material. Encourage the children to practice at home, drawing the different objects, people, etc., which they will need to use in their illustrations. Interest them in hunting for pictures of similar groupings, buildings or whatever is needed. Two finished illustrations should be made by each pupil during the month.

May and June. Color.

Make a color chart, illustrating the three color qualities, hue, value and intensity. Carry out in three values and three intensities. Inasmuch as this grade is studying Paper and Paper Products, make the chart entirely of paper samples. Arrange on a 22″x28″ chart of chip board in an orderly way, each child contributing something.

Paint weeds, grasses and single flowers in silhouette and in color. Work for placing on paper and truthful representation. The latter will be secured by giving attention to growth. Make several drawings on a sheet showing joints, parts of stems, leaves, etc.

Paint a landscape showing sky, a hillside and a group of trees, or part of a lake. Practice drawing single trees first, remembering that shadows are purple.

Picture Study.

The following pictures should be studied in connection with other subjects. See general directions and type lessons

on Picture Study. The children should be able to give two-minute talks on the pictures by the end of the semester.

Parthenon—Athens.
Winged Victory.
Discus Thrower.
Horses of Parthenon Frieze.
Rheims Cathedral.
St. George—Donatello.
Moses—Michael Angelo.
The Night Watch—Rembrandt.
Aesop—Velasquez.
Evolution of the Book—John Alexander.
The Cairn.
Oral Tradition.
Egyptan Hieroglyphics.
Picture Writing.
Manuscript Book.
The Printing Press.

STANDARDS OF ATTAINMENT.

In Drawing.

Be able to draw a square and oblong box in any position, using "key lines."

Be able to convert the box into a table, chair or street car.

Be able to draw figures in action.

Be able to draw from memory with the brush, a weed, two flowers, three trees, and a landscape.

In Design.

Be able to design a unit and repeat it accurately in a well spaced surface pattern.

Be able to design a booklet cover, and a box.

Be able to letter and adapt lettering to a given space.

In Construction.

Be able to construct a box from drawings.

Be able to make, without help, a booklet.

In Color.

Be able to recognize, name, match and copy the six standard colors with three values and three intensities of each.

Define and use the terms hue, value, intensity, complement and triad.

In Illustration.

Know how to look up reference material, make sketches and notes in preparation for illustrating a story and illustrate the story in color.

In Picture Study.

Know the ten pictures assigned to this grade and give two-minute talks on each.

In Industrial Education.

Know how five different nations kept records before the invention of the printing press.

Be able to tell the story of the Invention of Printing.

Know the process of paper making and be able to identify ten different kinds of paper.

Optional Problems.

During the study of Greek life the subject of sculpture and modeling of statuary, vases, etc., may be emphasized with profit. The methods of the potter's wheel, building up by coils added one above the other, casting, modeling in the round and in low relief will interest the children. A paper weight modeled of clay, using the shape of a rabbit, frog, turtle, duck, or beetle will give the children an idea of how the sculptor works and will help them understand pictures of statues. Name and school should be incised on the bottom with a sharp stick.

GRADE VI-B.

AIMS.

The orderly expression of ideas through illustration, design and construction, and an understanding of the relation of design to constructed objects and to the industries in general.

Know something about the primitive industries of Peru and Egypt, especially weaving and pottery.

SUBJECT MATTER AND PROJECTS.

September. Color.

Make a color chart illustrating the three color qualities, hue, value and intensity, showing four values and four intensities. Samples of cotton, wool, silk, and linen textiles, samples of paper, colored beads, and pressed leaves may be used and flowers may be put up temporarily. Arrange in an orderly way on a 22″x28″ chart of chip board. See that the intervals in value and in intensity are equal.

Paint flowers, trees, single leaves and sprays in silhouette and in full color. Study joints, direction of stems and lines of growth. The brush should be well charged with paint and held by the end of the handle. See Course in Nature Study.

Paint an autumn landscape showing sky, hillside, end of a lake and trees. First practice single trees, and painting smooth washes of color.

October. Design and Construction.

Design and make a booklet for material collected during the semester on the primitive industries of Peru and Egypt. This will include a study of weaving with special reference to the linen industry, tracing the development from primitive processes to modern methods and a study of Pottery, including earthware, stoneware, and porcelain. See general treatise on Pottery and Clay Modeling, and trace this industry from primitive processes to modern factory methods. The book itself, including the sewing and cover design, must be finished in October, but the assembling of the contents will continue throughout the semester. The project naturally involves correlation of Language, Geography, History, Nature Study and Industrial Art. It includes collecting, arranging and mounting pictures, tracings, drawings, and themes in an orderly way in accordance with the principles of design.

Directions for making the Booklet.

Materials.

Two pieces of light weight tag board 9″x7¼″.

One strip of tag board 7¼″x¾″.

One sheet of heavy wrapping paper 20¾″x8¼″ to cover the tag board.

One sheet of wrapping paper 18¼″x7″ for the end papers.

Drawing paper 7″x1½″ for stubs.

Drawing paper 8½″x7″ for leaves. Use front fly leaf for title page.

Construction paper 7¼″x2″ to bind fold of book on the left. This should be darker and of a color to harmonize with the rest of the book.

Steps in construction.

Paste the three pieces of tag board on the cover paper, leaving one-eighth inch between the narrow strip of tag board and the tag board for the front and back covers. Cut off a triangular piece on each corner of the cover paper ¼″ from the corner of the book so that when the paper is folded over and pasted to the tag board the corners will be neat.

Paste end papers in place.

Fold stubs in the center and mark five holes for sewing. Place stubs in position on the fold and sew to covers, using five-hole sewing.

Paste the strip of construction paper (7½″x2″) on the fold of the book as a binding.

The cover of the book is to have the following spaced and arranged to make a good design. Title, unit significant of the title, and name of pupil. The title page will be the same, omitting the unit and adding the grade below the pupil's name. It will be well to have children letter the title page first, as this will give them more assurance when lettering the cover.

Strips of paper the size of the lettering and of the unit should be cut from drawing paper and moved about on cover to secure the best spacing. Practice lettering on the slips of paper. In doing this the child will note what changes he will have to make in the size of his lettering. The lettering may be transferred by blacking the back of the paper on which the letters have been printed. After the letters have been transferred to the cover they may be filled in with stick pens made of ¼″ dowel sticks and India ink. The dowel sticks should be sharpened wedge shape, leaving one end about ¼″ wide and the other a little narrower. The letters will be the width of the end of the stick. Children should practice lettering with these pens before attempting to fill in letters on the covers of the books. Tell children how these pens were used before steel pens came into use, when books were made by hand. See Industrial Arts in Elementary Education by Winslow and Gompf, pages 74-77 and 99-100.

November. Illustration.

Illustration of History and Language Themes. In preparation for this teachers are asked to study Chapter I on The Illustration of Themes in How Children Learn to Draw, by

Sargent and Miller, and the type lesson on "The Triumphal Procession of Columbus to the King's Court." The history lessons on the Romans and the Middle Ages will furnish interesting material for illustrations. Collect all available material in the way of pictures, descriptions, etc., and begin practicing the drawing of the various objects and people needed for the illustration. Encourage home sketching and save all work for comparison and encouragement.

Two finished illustrations should be made during the month. Use crayons for the final illustration.

December. Design and Construction.

The project for the month is to make a card index for a Christmas present. The aim is to lead children to see the relation between design and construction. Do not dictate the problem even though uniform dimensions may be accepted in the end.

Steps.

Sketch a plan for the card index case, scale $\frac{1}{2}$" to 1". Use rulers, sharp pencils and work for accuracy.

Materials.

One piece of gummed book linen 36"x$\frac{1}{2}$".

One piece of mounting board 8"x11".

Twenty pieces of tag board 3"x11".

Directions for making.

On the 11" ends, 3" from each side, make dots both top and bottom and connect with lines. On the 8" ends, 3" from the top of board, make dots and connect with lines. Two and a half inches from this line draw another line. Cut out corners. Slope side of box so that it slants down from 3" high in back to 2$\frac{1}{2}$" high in front. Score and fold on all lines, and bind corners and top with the gummed book linen. For the index cards have tag board extend up $\frac{1}{2}$" wide and 1" long. Make A 1" from end, B 2", and C 3", etc. This case may be used for library, letter, or cooking recipe index.

January. Perspective.

To learn to make truthful representations of constructed objects and to draw the human figure in action better. Study Chapter III in How Children Learn to Draw on The Drawing of Constructed Objects and pages 154-168 on The Drawing of the Human Figure.

Review key lines and rapid sketching of boxes, converting them into chairs, tables, bird houses, street cars and trucks. When drawing wheels use the opportunity to teach the principles of curvilinear perspective, pages 204-209, in How Children Learn to Draw. Use 9"x12" drawing paper and make drawings large. Try to show texture and construction by the quality of the line.

Picture Study.

By the end of the semester pupils should be able to give three or four minute talks on the following pictures:

Colosseum—Rome.
Arch of Titus.
Arch of Constantine.
Statue of Marcus Aurelius—Rome.
The Forum—Rome.
Rheims Cathedral—France.
Aurora—Guido Reni.
Sphynx—Egypt.
Pyramids—Egypt.
Temple of Karnak.

STANDARDS OF ATTAINMENT.

In Drawing.

Be able to draw accurately a chair, a bird house, and an automobile.

Be able to draw with the brush from memory three flowers, two weeds and a landscape.

Be able to draw accurate plans for a card index.

In Design.

Be able to make two units suggestive of Egypt and two of Peru: one a copy, and the other original.

Be able to letter and adapt lettering to a given space.

Be able to design a book cover.

In Construction.

Be able to construct a card index from drawings.

Be able to make a booklet having a cardboard cover, and stubs.

In Color.

Be able to recognize, name, and match the six standard colors with four intensities and four values of each.

Be able to define and use the terms, hue, value, intensity, complement and triad.

In Illustration.

Know the different steps in illustrating a story.

Be able to illustrate the story.

In Industrial Education.

Be able to give an account of the primitive industries of Peru and Egypt.

In Picture Study.

Be able to give three or four minute talks on the pictures assigned to this grade. See special treatise and type lessons on picture study.

GRADE VI-A.

AIMS.

To develop in children initiative and the power to think independently through a problem in construction before shaping the material for final construction.

To teach children how to search for material on a given subject, e. g., "The Iron and Steel Industry," and to assemble this material in booklet form.

To encourage children to use drawing as a means of expression and to draw outside the regular drawing lesson.

To teach the intelligent use of color.

SUBJECT MATTER AND PROJECTS.

February. Design and Construction.

Design and make a booklet on the subject of the Iron and Steel Industry. The book itself should be completed in February, but the assembling of the contents will extend over the entire time devoted to the study of Minnesota. For subject matter see Chapter II, The Industrial Arts in Elementary Education by Winslow and Gompf. Before assembling the material for the book a general plan for the arrangement should be worked out and all pupils follow this plan. Margins, spacing of illustrative material, such as drawings and pictures, and pasting should receive due attention. Inasmuch as the same book was made in October, children should be able to plan and make the book with less supervision and the results should be more finished in every way. Talk about and make a note of mistakes made in Grade VI-B and correct them in this book.

Directions for making the Booklet.

Materials.

Two pieces of light weight tag board 9″x7¼″.

One strip of tag board 7¼″x¾″.

One sheet heavy wrapping paper 20¾″x8¼″ to cover the tag board.

One sheet of wrapping paper 18¼″x7″ for the end papers.

Drawing paper 7″x1½″ for stubs.

Drawing paper 8½″x7″ for leaves. Use front fly leaf for title page.

Construction paper 7¼″x2″ to bind fold of book on the left. This should be darker and of a color to harmonize with the rest of the book.

Steps in construction.

Paste the three pieces of tag board on the cover paper, leaving ⅛″ between the narrow strip of tag board and the tag board for the front and back covers. Cut off a triangular piece on each corner of the cover paper ⅛″ from the corner of the book so that when the paper is folded

over and pasted to the tag board the corners will be neat.

Paste end papers in place.

Fold stubs in the center and mark five holes for sewing. Place stubs in position on the fold and sew to covers, using five-hole sewing.

Paste the strip of construction paper ($7\frac{1}{4}$"x2") on the fold of the book as a binding.

The cover of the book is to have the following spaced and arranged to make a good design: Title, unit significant of the title, and name of pupil. The title page will be the same, omitting the unit and adding the grade below the pupil's name. It will be well to have children letter the title page first, as this will give them more assurance when lettering the cover.

Strips of paper the size of the lettering and of the unit should be cut from drawing paper and moved about on cover to secure the best spacing. Practice lettering on the slips of paper. In doing this the child will note what changes he will have to make in the size of his lettering. The lettering may be transferred by blacking the back of the paper on which the letters have been printed. After the letters have been transferred to the cover they may be filled in with stick pens made of $\frac{1}{8}$" dowel sticks and India ink. The dowel sticks should be sharpened wedge shape, leaving one end about $\frac{1}{8}$" wide and the other a little narrower. The letters will be the width of the end of the stick. Children should practice lettering with these pens before attempting to fill in letters on the covers of the books. Tell children how these pens were used before steel pens came into use, when books were made by hand. See Industrial Arts in Elementary Education by Winslow and Gompf, pages 74-77 and 99-100.

March. Design and Construction.

Design and make a clay tile for a fire place or for a tea or coffee pot. Make a working drawing of the tile, showing top, side, and bottom views. Use rulers and sharp pencils and make the plan 5" square and $\frac{3}{4}$" thick. For a design to be outlined $\frac{1}{8}$" wide in the damp clay, "a sail boat on the bay" for the theme. Draw a 4" square and plan the sail boat, horizon line, distant hillside or line of elevators to fill the space. The boat will be in the foreground and, consequently, the largest object in the design.

A piece of clay 5" square and about $\frac{3}{4}$" thick should be shaped for the tile, by building up piece by piece and working out all air spaces. This is very important as the tile will break when fired if air spaces are left. After the clay tile has become leather hard a border may be traced around it with

a stick about $\frac{1}{8}$" wide $\frac{1}{2}$" from the edge of the tile. Trace the design and incise with the same stick. To prevent warping it will be necessary to remove a little clay from the bottom of the tile. Draw a square in each corner, leaving a margin of $\frac{1}{2}$" around the edge and connect them in the center with a circle $1\frac{1}{2}$" in diameter. Remove the clay within these squares to a depth of $\frac{1}{4}$". The child's name and name of school should be printed on the bottom. The tiles should be allowed to dry slowly by keeping them wrapped in a damp cloth. Tell children about the Rookwood tiles made in Cincinnati, Ohio, the Newcombe pottery made in New Orleans, Louisiana, and the Moravian tiles made in Doylestown, Pennsylvania.

April. Perspective.

More facility and skill in the drawing of boats and other constructed objects. Study Chapter III in How Children Learn to Draw on the drawing of constructed objects. Review key lines, drawing a box, a book, a chair, a street car and a truck. Make a collection of pictures of boats and learn to draw an ore boat and a sail boat.

May. Illustration.

Illustration of History and Language themes.

Study Chapter I on the Illustration of Themes in How Children Learn to Draw by Sargent and Miller, and the type lesson on "The Triumphal Procession of Columbus to the King's Court.

The History of the Crusades and themes from English will furnish exeellent material for illustration. Pupils choose subjects and begin collecting material which will help them in making a good illustration. Encourage home practice in drawing. Two finished illustrations should be made during the month. Save practice lessons.

June. Color.

Review color terms. See September outline.

Paint flowers in full color and in silhouette. Make practice pages in charcoal gray, showing careful brush drawings of single leaves, joints, stems and blossoms. See Course in Nature Study. Paint a spring landscape, showing rows of poplar trees in perspective.

Finish the book on the Iron and Steel Industry.

Picture Study.

The following pictures have been selected with the work in all subjects in mind and should be presented at the time when they will supplement the work to the best advantage. By the end of the semester the children should be able to give three and four minute talks on each:

Mosque of St. Sophia—Constantinople.

Taj Mahal—India.

Vision of a Knight—Raphael.
Sir Galahad—Watts.
King Arthur—Vischer.
The Vigil—Pettie.
St. George—Donatello.
The Puritan—St. Gaudens.
The Landing of Lord Baltimore—Trumbull.
Penn's Treaty with the Indians.
The Minnesota State Capitol and the mural paintings on its walls.
See book containing much valuable information about the History of Minnesota, with profuse illustrations. Ask the principal for this book; it is in the building.

STANDARDS OF ATTAINMENT.

In Drawing.

Be able to draw a freight boat and a sail boat with accuracy and with some degree for artistic pencil handling.

Be able to draw accurate plans for a clay tile and a booklet with stubs.

Be able to draw accurately with the brush a poplar tree, a marsh marigold, and a simple landscape.

In Design.

Be able to design an acceptable book cover.

Be able to letter and adapt lettering to a given space.

Be able to make a unit using a sail boat as the motive and adapt it to a given space.

In Construction.

Be able to make a booklet.

Be able to build a clay tile so that it will stand firing.

In Color.

Be able to recognize, name, and match the six standand colors with five values and five intensities of each.

Be able to define and use the terms hue, value, intensity, complement and triad.

In Illustration.

Know the different steps to take in illustrating a story.

Be able to illustrate a story with colored crayons.

In Picture Study.

Be able to give three or four minute talks on the pictures assigned to this grade.

In Industrial Education.

Be able to trace a piece of iron ore from the mine to wrought iron and steel.

GRADE VII-B.

AIMS FOR THE SEMESTER.

To teach pupils how to search out, assemble, and mount material on the subject of the Industries of the United States, with special reference to those in which design is an important factor, e. g., The Textile Industry, including cotton and woolen goods. This will include pictures, drawings, tracings, and information about the subject, gathered from text books and other sources, arranged to show the progress from primitive methods to the latest scientific developments.

To make a series of drawings to illustrate designs for different materials. This may include tracings.

The ability to apply the fundamental principles of perspective and considerable facility in quick sketching.

To develop an appreciation of color and the ability to apply it to a concrete problem, such as a poster to advertise a U. S. industry.

To develop initiative and the ability to think through a problem in construction through experimentation before shaping the material, e. g., making a booklet on The Industries of the United States and a wood block print.

SUBJECT MATTER AND PROJECTS.

September. Color.

Paint flowers, trees and an autumn landscape in full color. This will cover several lessons and should be developed as follows:

Paint flowers and trees in silhouette and in autumn coloring.

Review terms hue, value, intensity, triads and complementaries. Bring out the fact that shadows are purple.

Develop the following principles of Composition through a study of landscapes by Corot, Hobbema, Ruysdael, Mauve and Millet and through working out compositions of different shapes and proportion in line. Draw oblongs and divide the space in different ways. Through class criticisms develop a feeling for well related areas.

Paint autumn landscapes, showing sky, ground and one or more trees.

October. Design and Construction.

Plan and make a booklet on The Industries of the U. S.

Dicsussion of purpose of the book. This will determine the size, material, and how it shall be constructed.

Make frechand working drawings of the book.

Plan the cover, including name of the book, name of the maker, a simple unit suggestive of the contents, and the end papers. As a help in securing good spacing of units for cover design, cut out strips of paper and move

them about on the book cover, comparing and criticizing until satisfactory results are secured. Print plain capital letters upon these strips and transfer to cover by blackening the back with a soft pencil and tracing with a hard, sharp pencil. Make lettering pens of 3/16″ dowel sticks and go over letters with ink. Pages 24 and 25 of the Industrial Art Text Book No. 8 will aid in planning this book . The covers, including letter, must be completed in October. For suggestions about style of lettering to be used and spacing, see pages 19-28, Industrial Art Text Book No. 7. Assembling the contents will extent throughout the semester.

Design and make the end papers. This will include the designing, cutting and application of a small wood block. The design may be cut on the end of a cork, a small piece of soft wood, or linoleum. Industrial Art Text Book No. 8, page 52, will aid in showing how this is done. Assign the problem in advance so pupils can provide themselves with materials needed.

Making the Book.

Materials.

Two pieces of heavy weight mounting board $11\frac{1}{4}$″x$7\frac{1}{8}$″.

Two pieces $11\frac{1}{4}$″x$\frac{3}{4}$″.

Two pieces of book linen $12\frac{1}{4}$″x$1\frac{3}{4}$″. This should be of a color which will harmonize with the construction paper.

Two pieces of construction paper $12\frac{1}{4}$″x$8\frac{3}{4}$″ for the cover.

Two pieces of construction paper 11″x$8\frac{1}{2}$″ for the end papers.

The end papers may be made more interesting by repeating a small design to make a surface pattern. The boys and girls in this grade may design and cut their own stick prints, using a boat for the motive. These may be cut on one end of a cork or a small piece of soft wood. This is an excellent opportunity for teaching the Elements of Printing. See Winslow and Gompf.

Steps in Construction.

Each pupil should have a folded newspaper on his desk. As the top layer becomes sticky with paste it should be removed and discarded. This will keep the work clean. Apply paste to the back of the strip of book linen. Place one large and one small piece of the mounting board upon this book linen, leaving $\frac{1}{8}$″ between for a hinge.

Lines should be ruled on the book linen before paste is applied to insure accuracy. Mitre the corners and turn the extra amount of book linen over the edges at each end and paste on the inside.

TOOLED LEATHER BOOK COVERS

Place a clean piece of newspaper over this and rub thoroughly. Be sure there are no bubbles where the paste has not been rubbed down. Press in groove between the hinge and cover.

Apply paste evenly to one side of larger piece of construction paper, and paste on cover overlapping the book linen. Cut off a triangular piece from each corner of the cover paper 1/16″ from corner of book, turn over edges and paste.

Paste end papers in same way overlapping cover, with an even margin all around.

Put book cover under press and leave until thoroughly dry so it will not warp. Put sheets of paper between books.

Make other cover exactly the same.

With eyelet punch set eyelets as follows:

One in the center ½″ from edge of book.
One 2″ from top of book and ½″ from edge.
One 2″ from bottom of book, ½″ from edge.

Put together with rings or tape.

Contents of the Book.

It may include pictures, articles clipped from newspapers and magazines, cartoons, poems, samples of actual materials showing good design, original designs, themes, sketches of designs, etc. These should be carefully trimmed, mounted and the arrangement and spacing of the page carefully considered. This subject is particularly apropos at the present time, when the European markets are not supplying us with goods as formerly.

November. Perspective.

To learn to apply the fundamental principles of perspective and sketch common objects with greater facility and accuracy than in the previous grade. Draw boxes in any position. Change them into buildings and boats. Make a special study of buildings and boats. Make tracings from pictures, showing only the most important lines. After tracing, draw them from memory in different positions. Ask two or three pupils who do the best work to draw at the blackboard. The most important thing at this time is to get children interested in drawing.

December. Lettering and Design.

To learn to letter a show card or simple advertisement with stick pens. This is a problem in design. Consider purpose of card, size, color, margins, spacing and arrangement of lettering on the card. Use bogus paper for the card and cut out a piece of paper the size of the lettering. Move it about to secure the best placing on the bogus paper. Plan

lettering to fill the space and transfer to bogus paper. Letter with stick pens and ink after preliminary drill on pen strokes, form and spacing of letters and adapting words to a given space. The following are suggested as subjects: Silent zone; speed limit, 8 miles per hour; keep to the right; special sale of mackinaws, Glass Block Store; white goods sale, etc. Look at the Red Cross cards in the street car and make a similar one.

January. Illustration.

Illustration of Themes. Study the chapter on this subject in How Children Learn to Draw, by Walter Sargent, and the type lesson on "The Triumphal Procession of Columbus to the King's Court." Choose a subject from History or English and begin collecting material. If possible, choose subjects which will require boats or buildings, in order to take advantage of the November work in Perspective. Discuss with class the principles of Composition, such as Opposition, Subordination, Repetition and Balance. See Composition by Dow. Show examples so that pupils may see how an artist has solved the problem which he is attempting.

Study the following works of art whenever they supplement the work to the best advantage. By the end of the semester the children shuld know them and be able to give three-minute talks about them:

The Minute Man—Daniel French.
The Concord Fight—Simmons.
Declaration of Independence—Trumbull.
Spirit of '76—Willard.
Nathan Hale—MacMonnies.
Washington Crossing the Delaware—Leutze.
The Lafayette Memorial—French.
Mount Vernon.
Portraits of George and Martha Washington, and Thomas Jefferson—Gilbert Stuart.
Capitol at Washington.

STANDARDS OF ATTAINMENT.

In Drawing.

Be able to draw houses, stores and office buildings in different positions, and know the principles of perspective.

In Design and Construction.

Be able to design and make a booklet for school use, and a wood block print.

Be able to make units suitable for printed cotton cloth, and a plaid design for a mackinaw.

Be able to letter and adapt lettering to a given space.

In Construction.

Be able to make a book and a wood block for printing accurately cut.

In Color.

Be able to make pleasing color combinations based on a study of the color chart.

In Illustration.

Be able to assemble material and illustrate a theme.

In Industrial Education.

Be able to name the American industries in which design has a money value.

In Picture Study.

Be able to give three-minute talks on pictures assigned to this grade.

GRADE VII-A.

February. Figure Drawing and Illustration.

To learn to draw the human figure with a fair degree of accuracy as to proportions and use it in the illustration of themes. Study the chapter on this subject in How Children Learn to Draw. Draw figures in action from memory and from the model. Trace well drawn figures from pictures, drawing only the principal lines. Illustrate Skiing, Skating, A Hockey Game, Sliding, etc.

March. Design and Perspective.

To learn to draw one elevation of a room to scale and divide up the space into well related areas. Decide upon proportions of wall, place base board and picture moulding, window or windows, a picture hung by two wires and a chair or table. Cut out pieces of paper and move them about to secure the best spacing before making the final drawing. Use 12"x18" drawing paper, and finish with colored crayons. Before working out in color it will be necessary to have a series of lessons on Color to learn how to select color harmonies. Make a color chart showing the spectrum colors with three intensities and three values. Make a class problem of this as there is not time for each pupil to make a chart. Ask pupils to hunt for samples of colors in textiles to match the colors in the chart. Make another chart of these samples arranged in a similar way, and matching the colors in the first. Tell children that red on the wall makes a room look 30 per cent smaller, and yellow makes it look 30 per cent larger than it really is. Develop the idea that grayed colors are best for large areas and for back-grounds, reserving the brilliant colors for the small spaces. Look for examples in nature; birds, flowers, color of sky, grass, trees, etc.

Note: The work outlined for March may be carried over to the middle of April.

April. Design and Lettering.

Make a poster illustrating a European Industry. Decide upon the wording and the picture. Cut out pieces of paper and move them about on a sheet of bogus paper to secure good spacing. Do not forget the margins. Adapt lettering to space and transfer to bogus paper. Finish with colored crayons, using three colors and black. Apply colors in flat tones.

Note: The poster should be finished May 10.

May and June. Brush Drawing.

Make careful brush drawings of leaves, twigs, joints, stems, and single blossoms. Each pupil should have a specimen near enough so he can see it in detail. Use plenty of

paint and a wet brush. Practice with charcoal gray and then with color.

Make drawings of trees. Make a collection of pictures of the common trees. The form, lines of growth and direction of branches and massing of foliage should show a marked advancement in this grade.

Picture Study.

The following pictures will illustrate different phases of the work. The children should be able to give three-minute talks about them by the end of the year:

Statues of Abraham Lincoln, Gen. Sherman, Admiral Farragut, and the Shaw Memorial by Augustus St. Gaudens.
The Night Watch—Rembrandt.
St. Andrew's Shooting Company—Franz Hals.
Rheims Cathedral.
The Fighting Temeraire—Turner.
Portrait of Charles I—Van Dyck.
Sir Galahad—Watts.
The Shipbuilder and His Wife—Rembrandt.

STANDARDS OF ATTAINMENT.

In Drawing.

Be able to draw the human figure and use figures to illustrate a winter sport.

In Design and Construction.

Be able to design and make a book, design, cut, and apply a wood block.

Be able to letter well and adapt lettering to a given space.

In Color.

Know how to use color effectively in a poster and in a room.

In Industrial Education.

Be able to name the European Industries in which design has a money value. Be able to collect material on a given industry.

In Picture Study.

Be able to give three-minute talks on the pictures assigned to this grade.

GRADE VIII-B.

AIMS.

To teach the importance and value of design in industrial products.

To be able to think through a problem in design and construction, by means of sketches and plans, before handling the material, e. g., making a book, a garment for the sewing class or a problem in wood working.

To teach pupils how to look for and assemble material for a book on World Industries.

To know and be able to use the principles of perspective.

To develop a greater appreciation of color and more ability to use it.

To teach pupils how to appreciate a picture.

SUBJECT MATTER AND PROJECTS.

September. Brush Drawing.

Paint pine, poplar, elm, and maple trees in silhouette and in autumn colors. Greater accuracy in form, growth, branching, proportions and massing of foliage should be attained in this grade. Make a collection of pictures of trees and study characteristic branching, etc. Paint a landscape, showing a row of trees in perspective.

October. Design and Construction.

To plan, make, and design a cover for a loose leaf note book. This book will be called World Industries and the contents will consist of newspaper and magazine clippings, maps, pictures, cartoons, drawings, Language and History papers, poems, and designs relating to World Industries. Pupils should be taught to make rough sketches and plan the booklet before handling the material. In other words, do not dictate directions for making the book, but work out with pupils how it should be done even though the same general plan is followed by all in the end.

Materials.

Two pieces of heavy weight mounting board $11\frac{1}{4}''$ by $7\frac{7}{8}''$.

Two pieces $11\frac{1}{4}''$x$\frac{3}{4}''$ for the hinge.

Two strips of book linen $12\frac{1}{4}''$x$1\frac{3}{4}''$.

The book linen should be of a color which will harmonize with the construction paper.

Two pieces of construction paper $12\frac{1}{4}''$x$8\frac{3}{4}''$ for the cover.

Two pieces of construction paper $11''$x$8\frac{1}{2}''$ for the end papers. A simple design unit repeated to make an all-over pattern should be planned for the end papers. These may be cut on a piece of soft wood or on the end of a cork. In connection with this teach something of the history of block printing.

Steps in Construction.

Each pupil should have a folded newspaper on his desk. As the top layer becomes sticky with paste it should be removed and discarded. This will insure clean work. Apply paste (Adhezo) to the back of the strip of book linen. Place one large and one small piece of the mounting board upon this book linen, leaving $\frac{1}{8}$" between for a hinge. Lines should be ruled on the book linen before paste is applied, to insure accuracy. Mitre the corners and turn the extra amount of book linen over the edges at each end and paste on the inside. Place a clean piece of newspaper over this and rub thoroughly. Be sure there are no bubbles where the paste has not been rubbed down. With a ruler press in the groove between the hinge and cover.

Apply paste evenly to one side of larger piece of construction paper and paste on cover overlapping the book linen. Cut off a triangular piece from each corner of the cover paper 1/16" from corner of book, turn edges over and paste.

Paste end papers in same way, overlapping cover with an even margin all around.

Put book covers, with paper between, under a press and leave until thoroughly dry to prevent warping.

Make other cover in exactly the same way.

With eyelet punch, set eyelets as follows:

One in the center $\frac{1}{2}$" from edge of book.

One 2" from top of book and $\frac{1}{2}$" from edge.

One 2" from bottom of book and $\frac{1}{2}$" from edge.

Put together with rings or tape.

The Contents of the Book.

To consist of newspaper and magazine articles, designs, maps, cartoons, poems, pictures and drawings about the great World Industries. They should be carefully trimmed and mounted, being careful to keep even margins of at least one inch throughout the book. Only interesting material should be accepted, and that which has a direct relation to the subject. A definite plan of arrangement should be worked out in advance.

Cover Design.

Examine books and decide what should be placed upon the cover. Draw out from pupils that the only things necessary are the name of the book and the name of the author. A line of suitable width a certain distance from the edge, and a simple unit suggestive of the contents of the book may be added to advantage. Cut a strip of paper the width and length of the words World Industries. Cut another strip for the author's name, and a third piece for a unit. Move these about on the book

cover and modify until the right shapes and spacing are secured. Print lettering upon these strips and transfer to book by blackening the back with a soft pencil and tracing with a hard, sharp pencil. Practice using stick pens and when sufficient skill has been attained go over letters on the book with India ink. The fly leaf should be like the cover with the design unit omitted. Do this first as it will give practice, before doing the cover. Put together with rings or tape.

November. Perspective.

Add new material to World Industries book. Have pupils collect material during the month, then use one period for trimming and pasting. Review and be able to use the following rules of perspective:

Horizon line means eye level.

Converging lines are lines which, when extended, will meet.

Vanishing points are the points where converging lines meet.

Vertical lines do not converge.

Give a few simple exercises in rapid sketching from "key lines" for review. Study the chapter on Drawing Constructed Objects in How Children Learn to Draw. Draw boxes, books, chairs, tables, houses, stores and trucks. Review principles of curvilinear perspective. Draw a row of houses in perspective and color with crayons.

December. Lettering and Design.

Practice pen strokes, and make a straight line border. Rule light lines to keep the pattern straight. Practice words adapting them to different spaces. Print two lines of prose or poetry learned in the English class.

January. Illustration of Themes.

Study the chapter on this subject in How Children Learn to Draw, by Sargent, and type lesson. Select subjects which lend themselves to illustration from History and English lessons and begin collecting material for the same. Save all preliminary sketches to show progress in drawing. Make finished illustration with colored crayons.

Picture Study.

The following pictures should be studied when they will best supplement other subjects. By the end of the semester pupils should be able to give three and four-minute talks on each. See general treatise on Picture Study and type lessons:

Avenue of Trees—Hobbema.

Court of the Myrtles—Alhambra.

The Last Supper—Leonardo da Vinci.

Moses—Michael Angelo.
Erasmus—Holbein. Read The Cloister and the Hearth by Charles Reade.
The Jester—Franz Hals.
Syndics of the Cloth Hall—Rembrandt.
The Shipbuilder and His Wife—Rembrandt.

STANDARDS OF ATTAINMENT.

In Drawing.

Know the fundamental principles of perspective and be able to apply them with a fair degree of accuracy and facility. Be able to draw a row of houses in perspective, a chair, and an automobile.

In Design and Construction.

Be able to design and make a book, design, cut and apply a wood block.

Be able to letter and adapt lettering to a given space.

In Color.

Know how to work out pleasing color combinations from the color chart.

In Industrial Education.

Be able to make a list of world industries in which design and color have a money value.

In Picture Study.

Be able to give three-minute talks on the pictures assigned to this grade.

GRADE VIII-A.

February. Figure Drawing and Illustration.

To learn to draw figures in action and use them in the illustration of a theme. Draw from memory, from the model, and make tracings from good drawings to learn how to look for the most expressive lines. If possible, for variety, have a model in costume to illustrate an English or History lesson. Study chapter on figure drawing in How Children Learn to Draw. Illustrate a winter sport. Use colored crayons.

March. Design and Construction.

To learn how to plan the ground floor of a house, make drawings of elevations, plan and apply color harmonies. Make a ground floor plan for a seven-room house. Draw an end view of the living room, showing parts of two side walls. Place base board, picture moulding, a fire place at the end of the room, a picture above it hung by two wires, a table on one side of the room, a long window on the other and a rug on the floor. Draw on 12″x18″ drawing paper. Make the room illustrate balance and subordination. Finish with colored crayons. Before doing this it will be necessary to have several lessons on Color. Review color terms, hue, value, intensity, complements and triads. Make a color chart showing spectrum colors with four intensities and four values of each. Make this a class problem by dividing up the work, each group being responsible for a certain part. Develop the idea that background spaces should be in grayed tones of color and that brilliant colors should be used in small quantities. Look for examples in nature. Work out a color plan for the room. Place the rug, walls and ceiling in three values of one color, the rug being the darkest, the walls lighter and the ceiling the lightest. Why? Use colored crayons for the finished drawings.

Note: The preceding lessons may be continued until April 15.

April. Design and Lettering.

Make a poster advertising a well known world industry. This will include drawing, lettering, use of color, and composition, and may be in the nature of a test of the year's work. Begin by reviewing the industries studied during the year, each pupil deciding upon one which he thinks he can develop. Begin collecting material and making tentative sketches of plans. Cut out pieces of paper to represent the different spaces and plan in an abstract way first. Move these about changing shaping and proportions until the best arrangement is secured. Use bogus paper and colored crayons for the finished poster.

Note: This problem should be finished by May 15.

May and June. Brush Drawing.

Make freehand brush drawings of budding twigs, early spring flowers like the marsh marigold, iris, tulips, etc. Study carefully characteristic shapes of leaves, stems, joints, etc., to express growth. The supervisors will show examples of Japanese brush drawings when they make their visits. Practice drawing birds with the brush. The robin, woodpecker, and wren are familiar ones to begin with.

Picture Study.

The following pictures should be familiar to all by the end of the semester. Pupils should be prepared to give three and four-minute talks on each:

The Thatched Cottage—Corot.
Avenue of Trees—Hobbema.
Court of the Myrtles—The Alhambra.
The Adoration of the Kings—Velasquez.
Aesop—Velasquez.
Directresses of the Almshouse—Franz Hals.
Man With the Helmet—Rembrandt.
The Shipbuilder and His Wife—Rembrandt.
Joan of Arc—Bastian LePage.
Surrender of Breda—Velasquez.
The Winged Victory of Samothrace.
Taj Mahal—India.
The Passing of the Indian—Lorado Taft.

STANDARDS OF ATTAINMENT.

In Drawing.

Know the principles of perspective and be able to apply them in drawing any given view of a room.

Be able to draw the human figure and use it in illustrating a theme.

In Design and Construction.

Be able to draw a floor plan of a house.

Be able to letter well and adapt lettering to a given space.

In Color.

Be able to choose and apply a color scheme to a room elevation.

In Industrial Education.

Be able to write a one hundred word theme on the value of Design to the Industries.

In Picture Study.

Be able to give three-minute talks on the pictures assigned to this grade.

JUNIOR HIGH SCHOOLS.

"The aim of education is to place the child in real situations where he desires to think his own way out."

AIMS.

To be able to use Drawing as a trade language by relating it to the shop problems and other constructive work.

To develop the ability to draw common objects with the pencil to show how they are constructed, and to illustrate and record ideas in connection with the development of skill in the use of common tools.

To teach the value of Design in Industry.

GRADE VII.

SUBJECT MATTER AND PROJECTS.

Problem 1. Perspective.

Learn the fundamental principles of perspective and be able to sketch common objects with facility and accuracy.

Review drawing of square and oblong boxes wtih objects and from memory, using "key lines." See chapter on "The Drawing of Constructed Objects," in How Children Learn to Draw, by Walter Sargent, and Perspective by Dora Miriam Norton.

Convert the boxes into objects like the following: bird houses, chairs, tables, street cars, milk wagons, houses, office buildings, aeroplanes, etc.

Review principles of curvilinear perspective and draw with objects and from memory the following and similar subjects: dishes, lamps, and utensils, showing construction of handles, spouts, etc., and texture of material: front and three-quarters view of automobiles, showing wheels in perspective, telephones, boats, objects seen in a hardware store, etc.

Note: Use the best of these drawings later in a poster to advertise a Duluth product.

Problem 2. Lettering and Design.

Learn to letter a show card or simple advertisement with stick pens. This is a problem in design. Consider size of card, color, margins, space occupied by lettering and general arrangement of subject matter on card. Cut out pieces of paper and move them about to secure the best placing, then plan lettering to fill the space. Think of everything which will add to the attractiveness of the advertisement, thus achieving the purpose for which it is made.

Drill on pen strokes.

Drill on form of letters and adapting words to a given space.

Make a simple initial letter and letter two lines of poetry or prose learned in the English class.

Problem 3. Design and Construction.

Make a booklet to hold school material on a given subject, such as Current Events or Transportation, a kodak book, a portfolio or other book problem, agreed upon by teachers and pupils. The aims are to learn how to plan and make a booklet, design a cover and assemble the contents. The book itself should be made early in the year but the assembling of the contents should continue throughout the year. After deciding upon the kind of book, make freehand drawings to scale, showing size, construction, etc.

Make a simple unit suitable for end papers for the book, cut on wood or linoleum and apply.

Problem 4. Illustration.

To learn how to illustrate a History or English theme. Consult with teachers of those subjects and decide upon suitable themes. Study chapter on Illustration of Themes in How Children Learn to Draw, by Walter Sargent, and the type lesson on "The Triumphal Procession of Columbus to the King's Court." Begin collecting material, making sketchings, tracings, etc. Talk about principles of composition, such as Subordination, Repetition, Opposition, etc., and their application to this problem. Show pictures which illustrate what pupils are trying to do.

Problem 5. Design and Perspective.

Draw an elevation of a room, placing window, base board, picture moulding, picture hung by two wires, a table and a chair in the best arrangement possible. Cut strips of paper and work out abstractly first, to secure best spacing. Finish with colored crayons. This will naturally lead to

Problem 6. Consisting of a series of lessons on Color to learn how to combine colors harmoniously and to select simple color harmonies.

Make a color chart, showing the spectrum colors with three intensities and three values. Make a class problem of this, each pupil contributing something. Interest pupils in bringing samples of textiles and matching them to the colors in the chart, and making color charts of textiles and other materials. Effect of different colors, e. g., red makes a room look 30 per cent smaller, yellow makes it look 30 per cent larger than it is. Develop the principle that grayed colors are best for large areas, using brilliant colors in small quantities. Look for examples in nature: birds, flowers, color of sky, grass ,etc.

Problem 7. Design, Lettering and Color.

A poster advertising a Duluth Industry. Assign the problem some weeks in advance and ask pupils to begin collecting material for it. The following subjects are suggested: boats

for the McDougall-Duluth Shipbuilding Co., a row of shoes for the Hartman Shoe Co., children in mackinaws for the Patrick Co., telephones or a row of telegraph poles and wires in perspective for the Telephone Co., a room showing rugs for the Klearflax Rug Co., The Little Jack Horner Shop, The Glass Block Tea Rooms, The Kelly Hardware, etc. This problem will involve all subjects studied during the year and may be considered as a test of the year's work. After deciding upon the subject plan the poster with strips of paper, then adapt picture and lettering to those shapes. Finish with colored crayons.

Problem 8.

To know and be able to give three-minute talks about the following pictures. See general treatise on picture study:

The Minute Man—Daniel French.
Washington Crossing the Delaware—Leutze.
The Lafayette Memorial—French.
Declaration of Independence—Trumbull.
Capitol at Washington.
St. Andrew's Shooting Company—Franz Hals.
Surrender of Breda—Velasquez.
Portrait of Charles I—Van Dyck.

GRADE VIII.

SUBJECT MATTER AND PROJECTS.

Problem 1. Perspective.

Learn to apply the principles of perspective with greater facility and accuracy. Give a few simple exercises in rapid sketching from "key lines" for review of principles. Read the chapter on Drawing Constructed Objects in How Children Learn to Draw, by Walter Sargent. Draw houses, stores, office buildings and boats. Draw a row of houses in perspective. Draw a row of trees in perspective. Find pictures of rows of houses and trees and trace, using onion skin tracing paper.

Note: This is merely as an aid in learning to draw and the copy should be discarded when it has served its purpose.

Finish original drawings with colored crayons.

Problem 2. Lettering and Design.

Lettering with stick pens and spoon bill lettering pens, and its application to a problem in advertising. Practice pen strokes. Make simple, straight line borders, illustrating rhythm. Practice form of letters. Practice words adapting them to a given space. Letter two lines of prose or poetry chosen from an English lesson, and place it within a simple border. Subordinate the border to the lettering.

Design an initial letter. Show examples from mediaeval manuscripts shown in Lettering and Illuminating of Books, by Johnston, also School Arts Magazines.

Problem 3. Design and Construction.

To learn how to make a booklet or a portfolio to hold school material. It may be a book for Current Events, a Kodak Book or the rebinding of a pamphlet or paper covered book This may be decided by teachers and pupils. The book itself should be made early in the year, but the assembling of the contents should continue throughout the year.

Make freehand working drawings to scale, show plan, measurements, and construction.

Design a unit for end papers, cut on a wood block and apply. The spacing will largely determine the success of this design. Try several and choose the best one.

Problem 4. Design and Perspective.

Draw an end view of a room showing a little of the two side walls. Make drawings on 12″x18″ paper. Place picture moulding, windows, base board, furniture, rug and fireplace. Cut out pieces of paper and move them about to secure good spacing. Make the room illustrate balance and subordination. Finish with colored crayons. This will naturally lead to

Problem 5, or a series of lessons on Color to learn how to plan Color Harmonies.

Make a color chart showing spectrum colors with four intensities and four values of each. Make this a class problem, as there is not sufficient time for all to do it. Review complement and triads. Make a collection of textiles showing different intensities and values. Develop the idea that grayed colors are best for large areas. Why? Develop a color scheme for the room drawn. The rug should be the darkest value, the walls next and the ceiling the lightest. Why?

Problem 6. Illustration of Themes.

Study the chapter on this subject in How Children Learn to Draw, by Walter Sargent, and see type lesson on "The Triumphal Procession of Columbus to the King's Court." Consult with History and English teachers, decide upon a subject and begin collecting material. If there are figures in the picture it will necessitate practice in drawing figures in action, tracing figures and using all means available to work up interest. The amount of preliminary practice the teacher can secure will determine the success of the final illustrations.

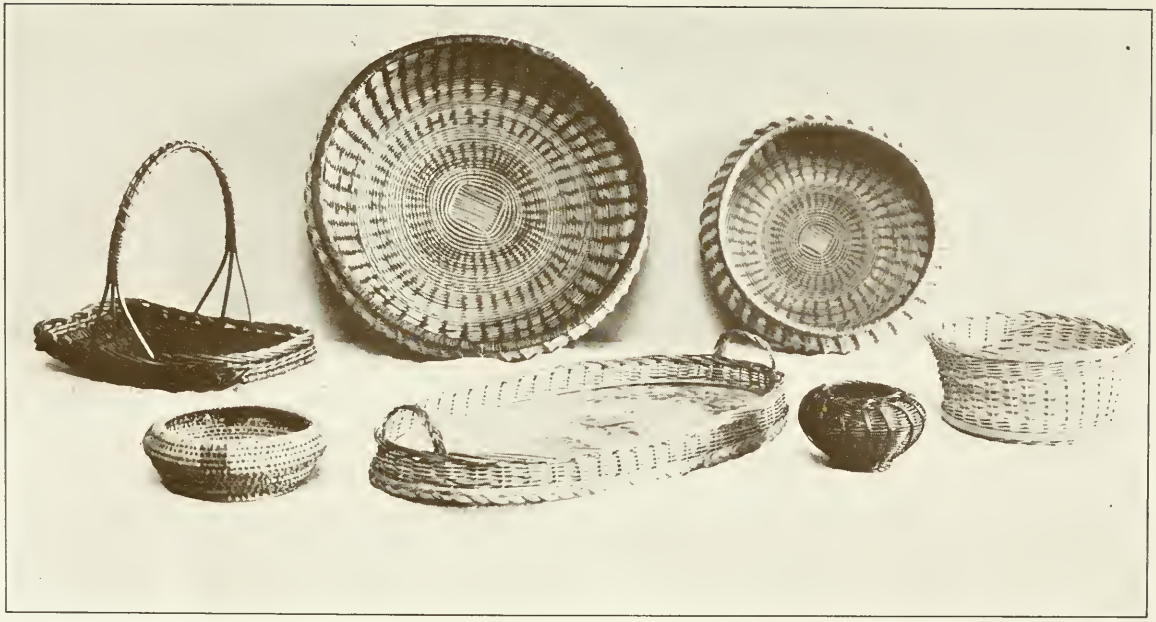
Problem 7. Design, Lettering and Color.

Make a poster advertising a Duluth Industry. This will involve all subjects studied during the year and may be considered as a test of the year's work. Assign the problem several weeks in advance and encourage pupils to begin collecting material for it.

Problem 8.

To know the following pictures and be able to give three-minute talks about them:

Avenue of Trees—Hobbema.
Court of the Myrtles—The Alhambra.
Moses—Michael Angelo.
The Adoration of the Kings—Velasquez.
Directresses of the Almshouse—Franz Hals.
Man With the Helmet—Rembrandt.
The Shipbuilder and His Wife—Rembrandt.
The Surrender of Breda—Velasquez.
Syndics of the Cloth Hall—Rembrandt.



BASKETRY
Art Department, Central High School

GRADE IX-B and A.

The pupils of the Ninth Grade in the Junior and Senior High Schools are arranged in groups according to the courses which they are pursuing; Commercial, Manual Training, Home Training and Academic. The work in Art is related as closely as possible to that of the other subjects. Teachers of Drawing should acquaint themselves with the class room and shop work in all subjects and wherever possible work out designs in advance of shop work and sewing.

Wood Working.

SUBJECT MATTER AND PROJECTS.

Proportion.

Spacing; related areas; organic design; unit of measurement; rhythm, etc. Show pictures of furniture which are fine in proportion: Giottos Tower, Parthenon, facade of Rheims Cathedral candlesticks, etc. Use delineascope. Look for principles of Opposition, Transition, Subordination, Repetition and Symmetry. Difference between design and decoration or ornamentation.

Design a chest of drawers. Consider height, width, relative size and spacing of drawers and handles. Confer with teacher of woodworking and have all problems designed and plans carefully worked out in the drawing room in advance of the shop work.

Perspective.

Principles.

Horizon line means eye level.

Converging lines are lines which, when extended, will meet.

Vanishing points are where converging lines meet.

Vertical lines do not converge.

Application of Principles.

Drill on "key lines." See How Children Learn to Draw, by Walter Sargent. Draw a row of houses and a row of trees in perspective, and work out in color with crayons.

Lettering with Spoon Bill Lettering Pens.

Drill on pen strokes. Make a straight line border, using vertical and horizontal strokes.

Drill on form of letters; begin with those made up of vertical and horizontal lines, adapting words to a given space.

Design an initial letter and a trade-mark. Make a collection of the latter.

Letter two lines of prose or poetry from English lesson.

Draw boxes and convert them into books, tables, chairs, buildings, trucks, street cars, etc.

Cylindrical perspective.

Drill upon appearance of circle and ellipse.

Draw wheels, towers, utensils, etc. A great deal of memory work should be done in connection with the drill on perspective.

Use drawing as a language to express wood working processes, e. g., different kinds of joints, etc., making rapidity and facility the aims.

Freehand working drawings, or plans of furniture, candlesticks and other wood-turning problems.

Show pictures with delineascope of pieces of furniture and have pupils draw from memory.

Pencil handling to express structure.

In this connection discuss principles of Design as outlined above.

Wood Turning Problems.

Problems in design, proportion, spacing, curves, suitability to purpose, material, possibilities and limitations of the lathe, etc.

Draw oblong shapes of good proportion and convert into designs for wooden trays and boxes.

Make designs for book ends.

A Ten-Weeks' Course in House Planning.

To make the series a connected whole, each lesson must have a definite aim, a good introduction, and a conclusion in the form of a class criticism.

AIMS.

Primary.

To awaken the interest of the boy.

To show the relationship between design and construction.

Secondary.

To give a general knowledge of the important points to be considered in house planning.

To give practical workable problems in planning a boy's cabin.

To give drill in freehand pencil technique.

PROJECT. PLANS FOR A BOY'S CABIN.

Introductory.

Presentation of fundamental principles of design, illustrated by simple problems of spacing, etc.

The Plan.

Situation of cabin: Discussion of conditions governing selection; exposures; sun, storms, etc. Ground plan showing lot, location of cabin, placing of shrubbery, trees, etc.

Collection of illustrative material, i e., furniture designs, drapery patterns, interior and exterior views of cabins, etc., followed by careful discussion, criticism, and selection, supplemented by use of slides, etc.

Discussion of practical problems; location of cabin; possibilities; limitations; conditions governing size; convenient arrangements; materials; cost, etc.

Floor plan sketched roughly, showing rooms, location of doors and windows, general proportions, approximate measurements. Working diagram for criticism and discussion.

Development of Plan.

Floor plan drawn up carefully, with dimensions. Same, showing arrangement of furniture. Develop principles of good spacing, harmony, consistency of line, structural lines of the building, etc.

Furniture.

Discussion of rules governing choice; appropriateness; materials; rugs; walls; color, etc.

Sketches, suggesting proportion and style of furniture for different rooms.

Freehand working and perspective drawings of typical pieces of furniture.

Elevations.

Development of elevation for one wall of each room —and for two adjoining walls of one room. Principles of subordination; consistent arrangement of spaces; balance, etc.

Perspective drawing of corner of room for which two elevations were made.

Color.

Plan of scheme for entire cabin developed in plan for each room. Simple elements of color harmony; dominance; balance of intensities and values; suitability of color schemes to use and environment.

Careful and consistent coloring of one elevation.

Exterior of Cabin.

Drawing of front elevation, developed from ground and floor plans, and interior elevations.

Development of perspective drawing of cabin, showing situation on lot.

The Summary.

General Criticism.

The entire series of drawings, and the illustrative material to be mounted on uniform sheets, so that they may be put together in a loose-leaf book.

References.

For Design principles: Theory and Practice of Teaching Art, and Composition by Dow; Principles of Design, and Design in Theory and Practice by Batchelder.

A Course on House Planning and Furnishing by Charlotte Wait Calkins.

For floor and ground plans, etc.: Craftsman Homes and More Craftsman Homes by Stickley; House and Garden; House Beautiful.

For elevations, furniture, etc.: The Touchstone Magazine; Copies of the Studio Year Book.

For Furniture: Berkey and Gay Co., Grand Rapids, Michigan, furnish charts of furniture for a very small price. Other furniture catalogues.

For exterior elevations, etc.: Craftsman Homes; Studio Year Book; The House Beautiful; The Touchstone Magazine; House and Garden.

Outline by Weeks.

Introduction.

General discussion; collection of illustrative material; floor plans; preliminary sketches. Furniture drawings, elevations and perspective views. Elevations, two weeks.

Color; first principles of harmony; selection of schemes for different purposes; developing samples of colors for the cabin; for the rooms. Coloring one elevation.

Discussion of situation; ground plan; elevation of front of cabin.

Perspective drawing of cabin. General situation of cabin. Two weeks.

Mounting of plates and illustrative material. Arrangement in loose-leaf book.

One period a day, five days a week, is the time allotment for the preceding course.

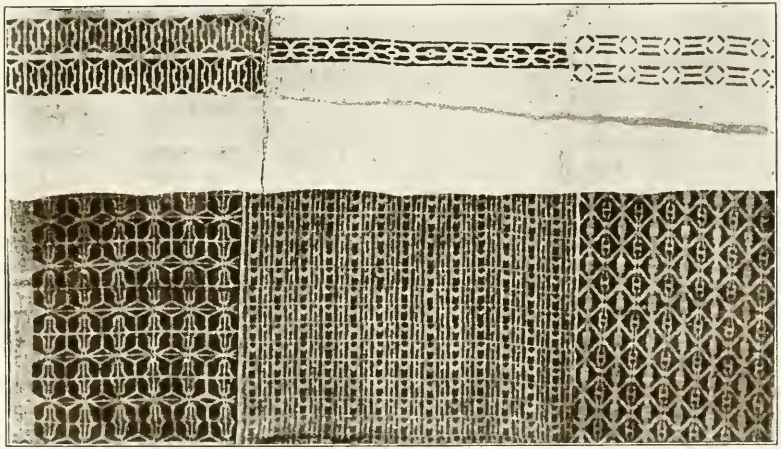
Picture Study.

The following pictures should be studied to supplement the drawing. They should be presented at the time when they illustrate a problem which the pupils are trying to solve.

Giotto's Tower.
Court of the Myrtles—The Alhambra.
Avenue of Trees—Hobbema.
Nave of a Gothic Cathedral.
Venetian Palaces for spacing of windows, doors, etc.
Winged Victory for curves.
Designs for candlesticks for curves.
Colonial doorways and houses.

HOME TRAINING.

"Fine Art implies fine relations. Art study is an attempt to create fine relations by line, mass, and color. Increase of power comes from exercise."—Arthur Wesley Dow.



DESIGN
Freshman Class, Central High School

AIMS.

To help girls attain a standard by which they may be guided in the wise selection of the many common things related to the home, and to establish in their minds a well balanced attitude toward dress.

To help them to realize that Beauty is not a matter of individual caprice or fancy, but that it depends upon very definite principles of Art.

To teach them through concrete problems how to furnish a room, design a dress, and select materials for the same, harmonious in color and good in design; and that excellence and suitability are not always dependent upon price.

SUBJECT MATTER AND PROJECTS.

Approach Through General Principles, viz.:

Proportion or comparative relations of various dimensions.

Rhythm or measured motion, which is always with us as in our breathing and pulse beats. We walk rhythmically and are soon tired when the regular pace is broken on uneven ground. It brings order, co-operation, and unity. It may be seen in the flight of birds, the swimming of fish, and the beat of waves.

Subordination is the relation of parts to a dominant element so as to form a unit. It is obtained by contrast in size, shape, or color; and by composition of lines.

Opposition or the meeting of two opposing forces.

Transition or a softening of the lines of opposition.

Symmetry or the equal balancing of parts.

Adaptation is recreating nature's forms in such a way that they can be worked out in different materials, such as textiles, metals, wood, etc.

Show examples of principles with delineascope. Students keep note books for tracings, sketches, pictures, and notes on principles.

Color. Read general treatise on Color, and review terms. Study various ways of creating color harmonies for costume designing and house planning. A contrasted harmony is one hue plus a neutral; a dominant harmony, one hue plus its values and intensities; an analagous harmony is made up of neighboring hues; a complementary harmony of complements; and color triads or alternate hues in the color wheel. Ways of creating harmonies. After selecting a color scheme—

Add some of each color to the others.
Add neutrals to each color.
Add a common color to each.

Textiles.

Design—abstract.

Design as related to textiles.

Characteristic design of different peoples:

Egyptian.
Peruvian.
Japanese.
Italian Renaissance.
Russian. Scandinavian.
Greek.
American Indian.

Modifications of Peruvian or Indian designs, to be used later either, on a dress, table runner, bag or some problem to be selected.

Problems.

Design rows of tucks and striped ribbon from standpoint of spacing.

Design a plaid from standpoint of spacing.

Trace, from a fashion book, a costume illustrating horizontal lines and criticize spacing. Retrace, making corrections.

Find examples of Opposition in fashion books and trace. Retrace changing lines to illustrate principle of Transition for the purpose of making design less severe.

Find a design for a one-piece dress in which the principle of subordination has been used. Study relation of lines and masses.

Costume Design.

Design or shape of garment; study the human figure. Decided by use for which it is intended.

Material.

Must follow lines of the human figure.

Amount of ornamentation determined by kind of dress, its purpose, material of which it is made, etc.

Color. Decided by coloring of wearer: skin, eyes, and hair.

History of Costume.

Greek.
Roman.
European peasant.
Elizabethan.
Empire.
Colonial.
1860.
The present.

Making a Costume involves:

Ability to make a design as a whole.

Knowledge of textile to be used: its possibilities and limitations.

Construction and manipulation of material.

Problems.

Design a costume, with aid of fashion books, illustrating Subordination. Work out in different color harmonies. This design is to be a personal problem; each girl to consider her own figure; color of hair, eyes, etc., in a way to correct defects and emphasize strong features. It may be a street dress, or an afternoon dress, or an evening dress.

In selecting material:

Match hue of eyes, hair, complexion, or lips, and work out in contrasted harmony.

Design costume same as 1, dominant harmony.

Design costume same as 1, complementary harmony.

Design costume same as 1, triad.

Trace designs of costumes, color and match in textiles.

Obtain silhouette of head by tracing, and design coiffures and hats. The history of costume will be found helpful at this time.

Design and Make.

Several small useful articles chosen from the following: These may be made as well as designed in the Art Class. Remember that decoration or ornamentation should conform to the shape of the form decorated.

Small work bag with cross stitch design.

Child's bib with cross stitch design adapted from an animal form. Work out on cross section paper.

Table runner. Crash with crocheted border. Design same as for cross stitch.

Guest towels. Straight line borders in running stitch. Flower motif designs with background in running stitch.

Darned in Embroidery in color. (See Newcombe Embroidery.)

Adapt an animal form to a border for cross stitch or fillet crochet. Work out in class a table runner, work bag, or child's bread and milk set.

Adapt a plant form to darning stitch. This may be adapted to the one piece dress which is made in this grade, or to a border for a table runner.

Make a design for a wood block not larger than 1″x1½″ and suitable for a textile. Cut and apply for a surface pattern to a scarf, a work bag or a table cover.

Interior Decoration.

The same principles which have been emphasized under Costume Design are applicable to house furnishing and the problems of the home. Begin with review of perspective and abstract problems in spacing. Use pictures and delineascope and have frequent short class criticisms.

Perspective.

Principles.

Horizon line means eye level.

Converging lines are lines which, when extended, will meet.

Vanishing points are where converging lines meet.

Vertical lines do not converge.

Application of principles.

Drill upon "key lines." See How Children Learn to Draw, by Walter Sargent.

Draw boxes and convert them into tables, chairs, houses, etc.

Cylindrical perspective.

Drill upon appearance of circle and eclipse.

Draw wheels, towers, utensils, etc.

Note: The perspective should be largely memory work with rapidity and facility as the aims.

Draw the floor plans for a house of six or seven rooms for a family of five.

Draw one elevation of the living room, showing distribution of wall space into related areas. Cut out pieces of paper and move them about in the space and modify until best arrangement is secured, then change these into furniture, fireplace, pictures, etc.

Review color principles and work out elevations of room in color.

Draw an elevation of one other room in the house, showing a corner, and develop in color. Use three values, dark, medium, and light, respectively, for floor, walls and ceiling.

Consult the following books for help in developing the above problems:

Batchelder—Design in Theory and Practice.
Arthur Wesley Dow—Composition.
Estelle Peel Izor—Costume Design and House Planning.
Bolmar and McNutt—Art in Dress.
Dress Design.
History of Costume.
Vanderpool—Color Problems.
Interior Decoration—Frank Alva Parsons.
Principles of Advertising Arrangement—Frank Alva Parsons.
Plates on Historic Costume.
Plates on Costume Design.

FIGURE DRAWING FOR ILLUSTRATION
Art Department Central High School

ACADEMIC.

AIMS.

To develop Appreciation through an understanding and application of the principles of Design. Design is to be understood as being something structural and organic. Popular usage has restricted it to decoration and ornamentation. Good Design implies fine relationships, hence spacing or proportion is the ground work in the teaching of Design. The following principles are dependent upon this great general principle of Proportion, or Spacing:

Opposition
Transition
Subordination
Repetition
Symmetry.

These principles are applicable to all works of Fine Art, including Architecture, Sculpture, Painting, Music and Poetry, and this relationship should be pointed out whenever possible.

SUBJECT MATTER AND PROJECTS.

Problems in Spacing.

Elevation of a Room.

Proportion of width and height.

Placing of picture moulding, base board, fireplace, book cases, pictures, doors and windows.

Make careful drawings to be worked out later in color.

Landscape Composition.

Place several pictures of landscapes which have good arrangements of light and dark so that all can see them. Make copies, using charcoal gray or charcoal.

Work for masses of light and dark.

Several should be done in one period.

Put up and criticize from standpoint of Spacing.

Paint a landscape containing sky, ground, and trees well spaced.

Draw oblong shapes with charcoal and convert into Designs for Pottery and Wood Turning. These may be designs for bowls, vases, and candlesticks.

Discuss different kinds of curves at this time. Compare the curve of force with other curves.

Show pictures to illustrate good line compositions: Japanese prints; drawings by Michael Angelo and Raphael; Holbein and others; pictures of Greek sculpture, etc., furnish excellent material for studying rhythm of line.

Design and Construction.

Make a portfolio for holding drawings. Make freehand working drawings to show plan and construction.

Perspective and Interior Decoration.

Learn and be able to apply the principles of perspective. Review by quick drill on "key lines" and drawing boxes, houses, street cars, etc.

Draw from memory or imagination a street, showing houses on both sides. Make several quick sketches with charcoal until the principles of "Converging lines" is clearly understood. Finish in color with crayons. Draw rows of trees in perspective. Finish with colored crayons.

With onion skin tracing paper, trace from good pictures, rows of houses and trees.

Draw one view of the corner of a room. Study converging lines carefully. Show an end wall and a portion of two side walls. Plan a color scheme of three values of one color and a complementary color and finish with colored crayons. See Perspective by Dora M. Norton.

Composition, Design and Lettering.

Plan and make a poster which will advertise a Duluth Industry. Assign the problem sometime in advance and have pupils begin to collect material. They must be shown how to do this. See "How Children Learn to Draw," by Sargent. The following subjects are suggested: Boats for the McDougall-Duluth Shipbuilding plant; smoke stacks and sky line for Steel plant; a row of shoes for the Northern Shoe Co.; a row of children in mackinaws for the Patrick Co.; a room with Klearflax rugs on the floor for the Klearflax Rug Co., etc.

Other subjects might be the Little Jack Horner Shop or The Glass Block Tea Rooms. This problem will involve everything studied during the year. Lettering, perspective, color design and composition. Use Show Card Colors and plan a simple color scheme. This will be the opposite of the color scheme for a room. Choose the colors which will carry well and do the work which the poster was designed to do.

Picture Study.

Pictures should be used constantly to illustrate principles. The pupils of this group should be familiar with the following works of art by the end of the year and be able to give three and four minute talks about each.

The Sphynx.
The Temple of Karnak.
The Parthenon.
The Winged Victory.
The Colosseum.
The Arch of Titus.
Statue of Moses—Michael Angelo.
Rheims Cathedral.
Canterbury Cathedral.
Westminster Abbey.

Erasmus—Holbein.
The Shipbuilder and His Wife—Rembrandt.
The Adoration of the Kings—Velasquez.
Portrait of His Daughter—Titian.
St. George—Donatello.
Rain, Steam, Speed—Turner.
Landscapes by Corot.
Avenue of Trees—Hobbema.
The Minute Man—Daniel French.
Admiral Farragut—Augustus St. Gaudens.
Statue of Black Hawk—Lorado Taft.
Alice—William Chase.
Portrait of His Mother—Whistler.
Capitol at Washington.
Minnesota State Capitol.
Congressional Library—Washington.

COMMERCIAL.

AIMS.

To teach the value of Art in Industry and to give to students electing the Commercial Course some idea of the relation of Design to advertising problems. This will be done through concrete problems illustrating the principles of Opposition as shown in form and color, Transition, Subordination, Repetition and Symmetry.

SUBJECT MATTER AND PROJECTS.

Freehand Lettering with Pencils, Charcoal, Brushes, and Spoon Bill Pens.

Drill on pen strokes, form of letters, and spacing of letters and words.

Letter a show card or label, adapting lettering to a given space.

Letter an advertisement, using red and black ink, or black with one other color.

Design an initial letter and letter one stanza of four lines of poetry. Consider margins, spacing, form, etc.

Design straight line borders with spoon bill lettering pens.

Design simple units which may be used in connection with lettering at the beginning and end of a line, as tail pieces, etc.

Letter a show card in color, illustrating the principle of Opposition.

Review spectrum colors: hue, value, intensity, complementaries, and triads.

See special treatise on Color.

Relation of Color to Advertising. Different ways of showing Opposition.

Make a car card to advertise something made in Duluth, using only lettering in two colors.

Plan spacing with strips of paper and work out with show card colors and brush.

Principles of Perspective and their application.

Principles.

Horizon line means eye level.

Converging lines are lines which, when extended, will meet.

Vanishing points are where converging lines meet.

Vertical lines do not converge.

Application of Principles.

Drill upon "key lines." See How Children Learn to Draw, by Walter Sargent.

Draw boxes and convert them into books, tables, chairs, trunks, traveling bags, etc.

Cylindrical perspective.

Drill upon appearance of circle and ellipse.

Draw trucks, lamps, dishes, utensils, etc.

Note: The perspective should be largely memory work. Rapidity and facility should be the aims.

Design and Composition.

Make a poster advertising a Duluth product. The poster must be done in three colors and black and contain a drawing of a constructed object.

Steps:

Decide upon the subject.

Decide upon the size.

Cut pieces of paper to represent the different parts of the poster, and move them about to secure well related shapes and sizes. Show examples of posters and pictures which illustrate the five principles of composition. Show good and bad arrangements side by side. Use delineascope and pictures collected by pupils and teachers. Apply principles and give reasons for choice.

Design and Construction.

Make a portfolio for drawings and other material used in the drawing class. Consider size of paper and work out dimensions of portfolio. Make it of chip board, cover paper and book linen. Make freehand working sketches to show parts and construction. Make a cover design, making it a problem in spacing. Cut out strips of paper, move them about on the cover and modify until best arrangement possible is secured. Frequent short, snappy class criticisms are invaluable.

Other Problems Related to Commercial Work.

Design trade marks for different commercial firms to be used on letter heads and advertising material. They may

consist of monograms or units suggestive of the product. Choose the best one and make a wood block print of it.

Design a letter head for stationery and plan imaginary letters. This, again, is a lesson in spacing and should be planned first in abstract spaces. This draws the attention entirely to the spacing instead of to the subject matter. Draw attention to the value of and importance to a business house of letters properly written and designed. Draw up a plan for decorating a window space in one of the down town stores.

Picture Study to Illustrate Principles of Composition.

Parthenon—Athens, Greece.
Rheims Cathedral—Rheims, France.
Colosseum—Rome, Italy.
The Spinner—Nicholas Maes.
Madonna of the Chair—Raphael.
Aesop—Velasquez.
Sphynx—Egypt.
Appeal to the Great Spirit—Cyrus Dallin.
Portrait of His Master—Whistler.
Fog Warning—Winslow Homer.

FOUR YEAR ART COURSE FOR HIGH SCHOOLS.

Drawing is the language of form and therefore is particularly the language of constructive work, and provides the means of working out problems of construction before they are undertaken in actual material.''—Walter Sargent.

The following series of lessons is planned to correlate as closely as possible with the other subjects in the course of study. Inasmuch as design is the basis of all problems in construction and the basis of all art appreciation, it has been made the starting point for all lessons. Since good design is dependent upon the great general principle of good spacing or proportion the following principles will suggest to students ways of solving their own problems and show them how artists have solved similar problems, not by guess work or luck, but by a definite, consistent course of procedure based upon principles. These should be referred to again and again and become a part of the pupil's vocabulary, thus laying the foundation for a steady growth in appreciation: Opposition, Transition, Subordination, Repetition and Symmetry. Other terms, such as rhythm, balance, harmony, unity, etc, will be used, but these are closely related to the five first given. See Composition and Theory and Practice of Teaching Art by Arthur Wesley Dow.

The work is arranged under six headings with six weeks for each, as follows: Drawing; Design; Pottery; Metalry and Jewelry; Basketry, Block Printing and Stencilling; Art History and Appreciation. Each of these subjects is pursued throughout the four years, more difficult problems being added as the student progresses. The general outline of the course is as follows:

Design and Drawing.

ART. I.

General principles of orderly arrangement: design and decoration not synonymous terms. Design includes both form and decoration, if any. Possibilities and limitations of design for different materials, e. g., a problem in design for metal or jewelry will be different from a problem in design for a piece of printed cloth. In adapting forms to a given space the lines of construction must always be considered. Show examples of good design with delineascope. Pupils watch for principles.

Problems.

1. Draw four squares on a sheet of 9″x12″ drawing paper and break up the space by means of a few vertical and horizontal lines. Work for variety with unity. Adapt to a stencil design for a table runner.

2. Make a drawing of a flower and develop a unit for a wood block print for textile printing. Cut on a wood block or piece of linoleum and apply.

3. Draw two oblongs of good proportion on a piece of 9″x12″ drawing paper. Make into a design for a flower pot

by changing slant of sides, etc. Make a copy to be taken to the pottery class later. Color any desired shade available in glazes.

4. Draw two oblongs and convert into designs for candlestick. Make the handle grow out of the saucer and shaft. Study curves in nature and try to imitate them.

5. Convert Problem 1 into a design for a tile.

6. Make a color chart showing hues, intensities and values.

7. Decide upon either a frog, turtle, beetle or rabbit to be modeled in clay for a paper weight. Look for pictures and make sketches in preparation for modeling.

8. Make a border not more than one inch wide and four inches long, using a flower unit repeated. Adapt this to saw piercing for a letter holder or book ends. The spaces to be sawed out must not be larger than the metal left.

9. Draw an oblong 7″x10″ on a sheet of bogus paper. Adapt this to a design for a reed basket having a wooden base 5″ wide. Finish with colored crayons.

10. Draw figures in action from memory and from the model. Draw constructed objects, starting with "key lines." See How Children Learn to Draw, by Sargent and Miller. Work for rapidity and facility. Try to express texture and construction by quality of line.

11. Illustrate a History or English theme. See chapter on Illustration of Themes in How Children Learn to Draw.

Learn value of principle of Subordination.

12. Make collections of pictures to illustrate each problem. Show pictures with delineascope.

13. Keep a sketch book throughout the year, and form the habit of using drawing to express ideas.

ART. II.

Problems.

1. Draw and paint flowers from nature. Select specimens which are decorative in character and study lines of growth and color. When weather permits sketch landscapes out of doors.

2. Draw two oblongs of good proportion 5″ wide and not as high on a sheet of paper. Convert into designs for low bowls with curved sides. See Modern Painters, Vol. IV, by Ruskin, for study of Curves, also books on Design, by Ernest Batchelder. Choose the best one and build it from the design.

3. Draw two oblongs 5″ high and not as wide and convert into designs for a vase with curved sides. Choose the best one and build following design accurately.

4. Draw two oblongs 8″ wide and not more than 3″ high and convert into a design for a bulb or nut bowl. Add three ornamental handles in such a way that they will be a part of the bowl, not something added as an afterthought.

5. Choose from list of forms suggested in Pottery Course and make a design for a dish with a cover. Make full size working drawings for use in the pottery room.

6. Make a design for a bar pin, involving saw piercing and small silver balls or wire for decoration. Show tools and discuss processes so students may make designs which are practical, e. g., they must know that after saw piercing a bar pin, the next process is filing and smoothing, which increases the size of the holes, hence the design must be made with this in mind or the holes will be out of proportion to the metal which is left.

7. Make a design for a chain, showing size and kind of links.

8. Make a design for something which involves the setting of a stone. It may be a watch fob, scarf pin or hat pin.

9. Make a design for a sandwich tray to be made of reed with handles.

10. Draw figures in action from memory and from the model.

11. Review principles of perspective and learn to draw a row of trees and a row of houses in perspective.

12. Illustrate a History or English theme. See How Children Learn to Draw.

13. Make collections of pictures to illustrate problems. Show pictures with delineascope. Students look for principles of Repetition, Subordination, etc.

14. Keep sketch books throughout the year.

ART. III.

Problems.

1. Outdoor sketching with charcoal in three values and color. When weather does not permit work inside on perspective, color, and principles of composition. Use delineascope to show how artists have solved the problems which students are attempting.

2. Draw oblongs of good proportions and convert into designs for sugar bowl and creamer. Strive to make handles, spouts and covers an organic part of the design as a whole.

3. Memorize several Indian, Greek and Egyptian units and adapt to a cast piece of pottery.

4. Make a design for a ring with a stone setting.

5. Make a design for a small raised copper bowl.

6. Make a design for a small raffia basket. Study Indian baskets. Make a design symbolic of Duluth, and work out in two colors and black.

7. Adapt landscape sketches made in September and make monotypes.

8. Bind with tapes a pamphlet, magazine, or paper-covered book.

9. Costume design. Apply principles of design to problems of spacing, such as tucks, stripes and plaid.

Choose from fashion plates, costumes illustrating design principles, trace and adapt to individual needs, work out in color.

10. Illustration of themes and figure drawing. Choose themes from History or English. See How Children Learn to Draw.

11. Keep sketch books throughout the year.

ART. IV.

Problems.

1. Outdoor sketching with charcoal in four values and in color. When weather does not permit, work inside on perspective, color, and principles of Composition.

2. Draw oblongs of good proportion and convert into designs for teapot, pitcher, bowl and optional problems. Work for balance, rhythm and symmetry. Use delineascope to stimulate ideas by showing how similar problems have been solved by artists.

3. Make a pattern to be incised on a piece of pottery.

4. Design a pair of copper book ends, a copper box with a pattern for etching. Make complete working drawings.

5. Make a design for a pendant involving stone setting and engraving.

6. Make a design for an enameled bar pin.

7. Make a design for reed work basket or a serving tray. Block print a design for base of tray.

8. Interior decoration, including review of Color and Perspective. Work out different views of interiors. Treat like other problems in design and composition and show that in order to secure unity and restfulness, the arrangement of furniture, placing of rugs and hanging of pictures must be in harmony with the structural lines of the room. (See Interior Decoration by Frank Alva Parsons.

9. Illustration of themes and figure drawing. Choose themes from History and English. This problem may be in the nature of a test of the four years' work in Drawing, Composition, Color and Design.

10. Keep sketch books throughout the year.

Note: Design and Drawing have been grouped together, twelve weeks' time being given to the two subjects. The instructor may introduce Drawing for the sole purpose of developing technique and facility in a given medium whenever it seems advisable.

Pottery.

A Four Year Course of Six Weeks Each Year.

AIMS.

To gain an understanding of the value of design in industrial and commercial products.

To develop individuality, coordination of hand and eye and appreciation of beauty as expressed in design and color in constructed forms.

To develop manual skill in plastic expression.

To gain an insight into one of the world's great industries, of both the present and past.

Outline of Course covering a period of twenty-four weeks, six weeks in each of the four years of the Art Course.

SUBJECT MATTER AND PROJECTS.

A body of knowledge about Pottery as an important world industry, and its development from early antiquity to the present, with experiments in the different methods and processes of construction and ornamentation. The work in design which necessarily precedes such a course, will be found outlined under the heading "Drawing and Design." See The Potter's Craft, by Binns, and The Industrial Arts in Elementary Education, by Winslow and Gompf.

ART. I.

Study of Clay.

Clay deposits; composition; qualities; preparation for commercial use; purifying; Rew Wing, Minnesota, clay. Building processes—hand building, throwing, on the potter's wheel, casting. Methods of glazing, pouring, dipping, and applying with the brush. Method of baking, stacking; the kiln; firing; measuring temperatures by means of pyrometric cones.

Study of Clay and Clay Products as a World Industry.

Earthware—the coarsest kind of pottery.

Stoneware—ordinary table ware.

Porcelain—made from Kaolin, highest quality of china dishes.

Model a paper-weight—animal form. May be a frog, turtle, beetle, etc.

Acquaintance with material and practice in handling; knowledge of possibilities and limitations; training in manual skill.

Build a tea-tile or fireplace tile.

The method of piece building. Application of incised design, the basis of all elementary problems in design applied to clay.

Building a candlestick with handle.

Use same method as building the tile, with addition of rim center and handle—the parts a structural part of the whole.

Building a flower-pot or jar for bulbs.

The method of coil building, in a straight sided, thick-walled piece of pottery. Addition of rim for strength and beauty. To be glazed on the outside only.

ART. II.

Study of Pottery Construction.

The potter's wheel; the plaster mould—two and three-piece moulds and pouring. Composition of plaster and of slip. Pressed pottery. Modern commercial methods. Visit Clyde Iron Works and observe methods of making moulds for casting iron.

History of American Indian Pottery: Hand Building.

Methods of work; coiling method; uses of pottery; methods of ornamentation; sources of design. Work of Chippewa Indians of Minnesota.

Building a low bowl.

Coil method of building; construction of curved sides; development of accuracy in following a definite pattern.

Building a small vase.

More advanced problem in coil building; greater test of accuracy in following definite design.

Building a bowl or vase with ornamental handles or feet.

Modeled ornament structural part of the pot. It may be a fern dish; bulb bowl; nut bowl; fruit bowl.

Building a jar or bowl with cover and some form of ornamentation.

Construction of parts that fit together. It may be a marmalade jar; rose bowl; pot pourri jar; ink well; butter crock; incense burner; jewel box; or ginger jar.

ART. III.

Study of Design Applied to Clay.

Space arrangements, incised design the basis of decoration in beginning pottery work. Modeled ornament; drip glazing; inlay matt; under glaze painting; over glaze painting, etc.

History of Pottery: The Potter's Wheel.

Egyptian and Greek Pottery. Uses; methods of construction; forms of decoration; value historically and aesthetically. (Make tracings of designs on Greek vases.)

Building sugar bowl and creamer set or pair of standing candlesticks.

Problem of building two pieces of the same size and shape at the same time.

Construction of three-piece plaster mould.

Cast pottery. Experiments with drip glazes.

Pottery design adapted from American Indian, Egyptian, or Greek, built and decorated in color.

ART. IV.

Study of Glazing.

Methods of glazing. Experiments in mixing to produce varieties of color effects.

History of Pottery.

Foreign potteries: China, Austria, England, Italy, France, Holland, and Germany. Sevres, Cantigalli, Dresden, Haviland, Wedgwood, Royal Doulton, Willow, Canton, etc.

American potteries: Rookwood, Cincinnati, Ohio; Newcombe, New Orleans, Louisiana; Grueby, Boston, Mass.; Van Briggle, Colorado Springs, Colorado; Moravian tiles, Doylestown, Pann.; Markham, Ann Arbor, Michigan.

Selection of the good and bad in commercial pottery from the down town shops.

1. Child's set of mug and plate, or bread-and-butter set of pitcher and bowl, ornamented with incised design and underglaze painting.

2. Teapot with pottery or wicker handle. Problem of addition of spout, and review of handle and cover problems.

3. Optional problem. Must include some form of enrichment or decoration.

Course in Metal and Jewelry.

Covers Four Years of Six Weeks Each.

AIMS.

To create a desire to choose, according to a higher standard of artistic value, the commercial products in jewelry and metal work through the appreciation of good design and technique.

To recognize and create an appropriate and suitable design for the material used.

Skill in the fundamental processes of sawing, filing, drilling, soldering, stone setting, polishing, riveting, turning, raising. Knowledge of the more difficult processes of chasing, engraving, and enameling.

ART. I.

SUBJECT MATTER AND PROJECTS.

History of metal work and the metal industry. Relation of design to the industry. (Show examples with delineascope.)

Names and uses of tools essential for the course, and names and meanings of terms such as alloy, anneal, oxidize, etc. Be able to make sketches of tools.

Processes.

Sawing, drilling, filing, sand papering, annealing, polishing, oxidizing.

a. Materials: Copper, brass, German silver.

b. Problems: book ends, letter holder, paper knife, or watch fob, etc.

Combination of processes learned in problems above.

a. Materials: Sterling and German silver, and copper.

b. Problems: bar pin, scarf pin, hat pin, or bracelet.

Soft soldering.

a. Materials: empty fruit or milk cans, and tin boxes; soft solder.

b. Problems: Make a sugar scoop, a cookie or doughnut cutter, a tin cup or other utensils useful for camping.

ART. II.

Work of first year prerequisite.

History of the metal and jewelry industries. Show examples of good design and craftsmanship with the delineascope. Relation of design to the industries; possibilities and limitations of material.

Processes.

Wire drawing—soldering.

a. Materials: Sterling silver and copper.

b. Problems: A long chain or a short watch chain, a bar pin involving saw piercing and use of balls or wire.

Stone setting.

a. Materials: Silver or copper.

b. Problems: A watch fob, a bar pin, cuff links, or inserts for long silver chain.

ART. III.

Work of first two years prerequisite.

History of the metal industry and craftsmen of the middle ages. Further knowledge of possibilities of design as applied to metal and jewelry.

Processes.

Review processes learned during first and second years.

Raising and planishing.

a. Materials: Copper, silver.

b. Problems: Tray, bowl, napkin clip, nut spoon, etc.

Stone setting, engraving with file.

a. Material: Silver.

b. Problems: Choose two of the following: Pin, pendant, cuff links, ring, hat pin, etc.

ART. IV.

Work of first three years prerequisite.

History of the metal and jewelry industries, including East Indian, European, and American craftsmen and designs.

Processes.

Etching.

a. Materials: Copper and silver.

b. Problems: Book ends, letter holder, copper box, tray, etc.

Engraving, enameling.

a. Materials: Silver and copper.

b. Problems: Choose two of the following: Pin, pendant, ring, bracelet, napkin clip, napkin ring.

COURSE IN ART APPRECIATION FOR JUNIORS AND SENIORS.

This course is open to Juniors and Seniors, one period each day, five days per week, for the entire year. No drawing or technical work is to be done. Typical examples of the works of art of all ages will be studied by means of prints and with the delineascope. These will be analyzed from the standpoint of guiding principles underlying all works of art. Since intelligent judgments can be formed only by an acquaintance with conditions, politically, religiously, morally, and scientifically, as much history will be studied as is necessary for such a background. A Short History of Art by De Forest and Caffin will be used as a text book and the rich and abundant material in the Public Library in the way of books and illustrative material to supplement the text.

AIMS.

To acquaint students with some of the enduring works of Art of all ages. This includes architecture, sculpture, painting, and industrial products.

To cultivate the ability to discriminate with justifiable reasons for choice.

To apply the principles of design to problems of every day life in selection, in construction, and in appreciation.

SUBJECT MATTER.

Typical examples of the prehistoric art of Greece, North America, Egypt and Peru.

Typical examples in architecture, painting, sculpture, and handicrafts of the art of Egypt, Assyria, Babylonia, Greece, Rome, Italy, Germany, France, Spain, England, China, Japan, India and America.

Primitive Art.

Architecture.

Mycenean and prehistoric Greek, e. g., The Lion Gate and Stonehenge. Houses of American and Mexican Indians and ancient Peruvians. Post and lintel and arch.

Sculpture.

Stone carving and engraving.
Totems.
Sphynxes of Egypt.

Painting.

Paintings of animals on walls of caves.
Articles for personal adornment.
Ornamentation of tools, utensils, and implements of warfare.

Handicrafts.

Pottery, including objects of utility and for religious and ceremonial uses. Found in ruins of all ancient civili-

zations, e. g., Greece, Central Asia, Egypt, France, Scandinavia, Peru, North America, etc.

Basketry, made of a variety of materials. Make a special study of those made by North American Indians.

Weaving.

Textile fabrics made on rude looms by North American Indians, Peruvians, Egyptians, etc.

A variety of ornaments, carved wooden objects, such as weapons, tools, implements, articles for personal adornment, such as charms, amulets, scarabs, etc.

Egyptian Art.

Architecture.

Outgrowth of religious beliefs.

Power and superiority expressed by size.

Tombs: different kinds. Study pyramid of Cheops as type.

Temples: Study Temple of Karnak as type. Columns, capitals, decorations and color.

Sculpture.

Sphynxes.

Statue of Rameses II, and The Scribe.

Small portrait statues of kings.

Bas reliefs on walls of temples, tombs and palaces.

Painting.

Decorative in character. Tomb of Perneb in Metropolitan Museum, New York.

Flat tones of color on dry plaster.

Fine feeling for pattern. Perspective ignored. Symbolism.

Handicrafts.

Weaving, use of linen for mummy cloths.

Pottery and clay modeling.

Metalry and jewelry.

Assyrian and Babylonian Art.

Architecture.

Temples—use of bricks.

Sculpture.

Bas reliefs of hunting scenes. (Make tracings.)

Painting.

Few examples.

Handicrafts.

Weaving and gem carvings.

Pottery, including glazed ware of great beauty, and enameled tiles.

ACADEMIC.

AIMS.

To develop Appreciation through an understanding and application of the principles of Design. Design is to be understood as being something structural and organic. Popular usage has restricted it to decoration and ornamentation. Good Design implies fine relationships, hence spacing or proportion is the ground work in the teaching of Design. The following principles are dependent upon this great general principle of Proportion, or Spacing:

Opposition
Transition
Subordination
Repetition
Symmetry.

These principles are applicable to all works of Fine Art, including Architecture, Sculpture, Painting, Music and Poetry, and this relationship should be pointed out whenever possible.

SUBJECT MATTER AND PROJECTS.

Problems in Spacing.

Elevation of a Room.

Proportion of width and height.

Placing of picture moulding, base board, fireplace, book cases, pictures, doors and windows.

Make careful drawings to be worked out later in color.

Landscape Composition.

Place several pictures of landscapes which have good arrangements of light and dark so that all can see them. Make copies, using charcoal gray or charcoal.

Work for masses of light and dark.

Several should be done in one period.

Put up and criticize from standpoint of Spacing.

Paint a landscape containing sky, ground, and trees well spaced.

Draw oblong shapes with charcoal and convert into Designs for Pottery and Wood Turning. These may be designs for bowls, vases, and candlesticks.

Discuss different kinds of curves at this time. Compare the curve of force with other curves.

Show pictures to illustrate good line compositions: Japanese prints; drawings by Michael Angelo and Raphael; Holbein and others; pictures of Greek sculpture, etc., furnish excellent material for studying rhythm of line.

Design and Construction.

Make a portfolio for holding drawings. Make freehand working drawings to show plan and construction.

Perspective and Interior Decoration.

Learn and be able to apply the principles of perspective. Review by quick drill on "key lines" and drawing boxes, houses, street cars, etc.

Draw from memory or imagination a street, showing houses on both sides. Make several quick sketches with charcoal until the principles of "Converging lines" is clearly understood. Finish in color with crayons. Draw rows of trees in perspective. Finish with colored crayons.

With onion skin tracing paper, trace from good pictures, rows of houses and trees.

Draw one view of the corner of a room. Study converging lines carefully. Show an end wall and a portion of two side walls. Plan a color scheme of three values of one color and a complementary color and finish with colored crayons. See Perspective by Dora M. Norton.

Composition, Design and Lettering.

Plan and make a poster which will advertise a Duluth Industry. Assign the problem sometime in advance and have pupils begin to collect material. They must be shown how to do this. See "How Children Learn to Draw," by Sargent. The following subjects are suggested: Boats for the McDougall-Duluth Shipbuilding plant; smoke stacks and sky line for Steel plant; a row of shoes for the Northern Shoe Co.; a row of children in mackinaws for the Patrick Co.; a room with Klearflax rugs on the floor for the Klearflax Rug Co., etc.

Other subjects might be the Little Jack Horner Shop or The Glass Block Tea Rooms. This problem will involve everything studied during the year. Lettering, perspective, color design and composition. Use Show Card Colors and plan a simple color scheme. This will be the opposite of the color scheme for a room. Choose the colors which will carry well and do the work which the poster was designed to do.

Picture Study.

Pictures should be used constantly to illustrate principles. The pupils of this group should be familiar with the following works of art by the end of the year and be able to give three and four minute talks about each.

The Sphynx.
The Temple of Karnak.
The Parthenon.
The Winged Victory.
The Colosseum.
The Arch of Titus.
Statue of Moses—Michael Angelo.
Rheims Cathedral.
Canterbury Cathedral.
Westminster Abbey.

Erasmus—Holbein.
The Shipbuilder and His Wife—Rembrandt.
The Adoration of the Kings—Velasquez.
Portrait of His Daughter—Titian.
St. George—Donatello.
Rain, Steam, Speed—Turner.
Landscapes by Corot.
Avenue of Trees—Hobbema.
The Minute Man—Daniel French.
Admiral Farragut—Augustus St. Gaudens.
Statue of Black Hawk—Lorado Taft.
Alice—William Chase.
Portrait of His Mother—Whistler.
Capitol at Washington.
Minnesota State Capitol.
Congressional Library—Washington.

COMMERCIAL.

AIMS.

To teach the value of Art in Industry and to give to students electing the Commercial Course some idea of the relation of Design to advertising problems. This will be done through concrete problems illustrating the principles of Opposition as shown in form and color, Transition, Subordination, Repetition and Symmetry.

SUBJECT MATTER AND PROJECTS.

Freehand Lettering with Pencils, Charcoal, Brushes, and Spoon Bill Pens.

Drill on pen strokes, form of letters, and spacing of letters and words.

Letter a show card or label, adapting lettering to a given space.

Letter an advertisement, using red and black ink, or black with one other color.

Design an initial letter and letter one stanza of four lines of poetry. Consider margins, spacing, form, etc.

Design straight line borders with spoon bill lettering pens.

Design simple units which may be used in connection with lettering at the beginning and end of a line, as tail pieces, etc.

Letter a show card in color, illustrating the principle of Opposition.

Review spectrum colors: hue, value, intensity, complementaries, and triads.

See special treatise on Color.

Relation of Color to Advertising. Different ways of showing Opposition.

Make a car card to advertise something made in Duluth, using only lettering in two colors.

Plan spacing with strips of paper and work out with show card colors and brush.

Principles of Perspective and their application.

Principles.

Horizon line means eye level.

Converging lines are lines which, when extended, will meet.

Vanishing points are where converging lines meet.

Vertical lines do not converge.

Application of Principles.

Drill upon "key lines." See How Children Learn to Draw, by Walter Sargent.

Draw boxes and convert them into books, tables, chairs, trunks, traveling bags, etc.

Cylindrical perspective.

Drill upon appearance of circle and ellipse.

Draw trucks, lamps, dishes, utensils, etc.

Note: The perspective should be largely memory work. Rapidity and facility should be the aims.

Design and Composition.

Make a poster advertising a Duluth product. The poster must be done in three colors and black and contain a drawing of a constructed object.

Steps:

Decide upon the subject.

Decide upon the size.

Cut pieces of paper to represent the different parts of the poster, and move them about to secure well related shapes and sizes. Show examples of posters and pictures which illustrate the five principles of composition. Show good and bad arrangements side by side. Use delineascope and pictures collected by pupils and teachers. Apply principles and give reasons for choice.

Design and Construction.

Make a portfolio for drawings and other material used in the drawing class. Consider size of paper and work out dimensions of portfolio. Make it of chip board, cover paper and book linen. Make freehand working sketches to show parts and construction. Make a cover design, making it a problem in spacing. Cut out strips of paper, move them about on the cover and modify until best arrangement possible is secured. Frequent short, snappy class criticisms are invaluable.

Other Problems Related to Commercial Work.

Design trade marks for different commercial firms to be used on letter heads and advertising material. They may

consist of monograms or units suggestive of the product. Choose the best one and make a wood block print of it.

Design a letter head for stationery and plan imaginary letters. This, again, is a lesson in spacing and should be planned first in abstract spaces. This draws the attention entirely to the spacing instead of to the subject matter. Draw attention to the value of and importance to a business house of letters properly written and designed. Draw up a plan for decorating a window space in one of the down town stores.

Picture Study to Illustrate Principles of Composition.

Parthenon—Athens, Greece.
Rheims Cathedral—Rheims, France.
Colosseum—Rome, Italy.
The Spinner—Nicholas Maes.
Madonna of the Chair—Raphael.
Aesop—Velasquez.
Sphynx—Egypt.
Appeal to the Great Spirit—Cyrus Dallin.
Portrait of His Master—Whistler.
Fog Warning—Winslow Homer.

FOUR YEAR ART COURSE FOR HIGH SCHOOLS.

Drawing is the language of form and therefore is particularly the language of constructive work, and provides the means of working out problems of construction before they are undertaken in actual material."—Walter Sargent.

The following series of lessons is planned to correlate as closely as possible with the other subjects in the course of study. Inasmuch as design is the basis of all problems in construction and the basis of all art appreciation, it has been made the starting point for all lessons. Since good design is dependent upon the great general principle of good spacing or proportion the following principles will suggest to students ways of solving their own problems and show them how artists have solved similar problems, not by guess work or luck, but by a definite, consistent course of procedure based upon principles. These should be referred to again and again and become a part of the pupil's vocabulary, thus laying the foundation for a steady growth in appreciation: Opposition, Transition, Subordination, Repetition and Symmetry. Other terms, such as rhythm, balance, harmony, unity, etc, will be used, but these are closely related to the five first given. See Composition and Theory and Practice of Teaching Art by Arthur Wesley Dow.

The work is arranged under six headings with six weeks for each, as follows: Drawing; Design; Pottery; Metalry and Jewelry; Basketry, Block Printing and Stencilling; Art History and Appreciation. Each of these subjects is pursued throughout the four years, more difficult problems being added as the student progresses. The general outline of the course is as follows:

Design and Drawing.

ART: I.

General principles of orderly arrangement: design and decoration not synonymous terms. Design includes both form and decoration, if any. Possibilities and limitations of design for different materials, e. g., a problem in design for metal or jewelry will be different from a problem in design for a piece of printed cloth. In adapting forms to a given space the lines of construction must always be considered. Show examples of good design with delineascope. Pupils watch for principles.

Problems.

1. Draw four squares on a sheet of 9"x12" drawing paper and break up the space by means of a few vertical and horizontal lines. Work for variety with unity. Adapt to a stencil design for a table runner.

2. Make a drawing of a flower and develop a unit for a wood block print for textile printing. Cut on a wood block or piece of linoleum and apply.

3. Draw two oblongs of good proportion on a piece of 9"x12" drawing paper. Make into a design for a flower pot

by changing slant of sides, etc. Make a copy to be taken to the pottery class later. Color any desired shade available in glazes.

4. Draw two oblongs and convert into designs for candlestick. Make the handle grow out of the saucer and shaft. Study curves in nature and try to imitate them.

5. Convert Problem 1 into a design for a tile.

6. Make a color chart showing hues, intensities and values.

7. Decide upon either a frog, turtle, beetle or rabbit to be modeled in clay for a paper weight. Look for pictures and make sketches in preparation for modeling.

8. Make a border not more than one inch wide and four inches long, using a flower unit repeated. Adapt this to saw piercing for a letter holder or book ends. The spaces to be sawed out must not be larger than the metal left.

9. Draw an oblong 7″x10″ on a sheet of bogus paper. Adapt this to a design for a reed basket having a wooden base 5″ wide. Finish with colored crayons.

10. Draw figures in action from memory and from the model. Draw constructed objects, starting with "key lines." See How Children Learn to Draw, by Sargent and Miller. Work for rapidity and facility. Try to express texture and construction by quality of line.

11. Illustrate a History or English theme. See chapter on Illustration of Themes in How Children Learn to Draw.

Learn value of principle of Subordination.

12. Make collections of pictures to illustrate each problem. Show pictures with delineascope.

13. Keep a sketch book throughout the year, and form the habit of using drawing to express ideas.

ART. II.

Problems.

1. Draw and paint flowers from nature. Select specimens which are decorative in character and study lines of growth and color. When weather permits sketch landscapes out of doors.

2. Draw two oblongs of good proportion 5″ wide and not as high on a sheet of paper. Convert into designs for low bowls with curved sides. See Modern Painters, Vol. IV, by Ruskin, for study of Curves, also books on Design, by Ernest Batchelder. Choose the best one and build it from the design.

3. Draw two oblongs 5″ high and not as wide and convert into designs for a vase with curved sides. Choose the best one and build following design accurately.

4. Draw two oblongs 8″ wide and not more than 3″ high and convert into a design for a bulb or nut bowl. Add three ornamental handles in such a way that they will be a part of the bowl, not something added as an afterthought.

5. Choose from list of forms suggested in Pottery Course and make a design for a dish with a cover. Make full size working drawings for use in the pottery room.

6. Make a design for a bar pin, involving saw piercing and small silver balls or wire for decoration. Show tools and discuss processes so students may make designs which are practical, e. g., they must know that after saw piercing a bar pin, the next process is filing and smoothing, which increases the size of the holes, hence the design must be made with this in mind or the holes will be out of proportion to the metal which is left.

7. Make a design for a chain, showing size and kind of links.

8. Make a design for something which involves the setting of a stone. It may be a watch fob, scarf pin or hat pin.

9. Make a design for a sandwich tray to be made of reed with handles.

10. Draw figures in action from memory and from the model.

11. Review principles of perspective and learn to draw a row of trees and a row of houses in perspective.

12. Illustrate a History or English theme. See How Children Learn to Draw.

13. Make collections of pictures to illustrate problems. Show pictures with delineascope. Students look for principles of Repetition, Subordination, etc.

14. Keep sketch books throughout the year.

ART. III.

Problems.

1. Outdoor sketching with charcoal in three values and color. When weather does not permit work inside on perspective, color, and principles of composition. Use delineascope to show how artists have solved the problems which students are attempting.

2. Draw oblongs of good proportions and convert into designs for sugar bowl and creamer. Strive to make handles, spouts and covers an organic part of the design as a whole.

3. Memorize several Indian, Greek and Egyptian units and adapt to a cast piece of pottery.

4. Make a design for a ring with a stone setting.

5. Make a design for a small raised copper bowl.

6. Make a design for a small raffia basket. Study Indian baskets. Make a design symbolic of Duluth, and work out in two colors and black.

7. Adapt landscape sketches made in September and make monotypes.

8. Bind with tapes a pamphlet, magazine, or paper-covered book.

9. Costume design. Apply principles of design to problems of spacing, such as tucks, stripes and plaid.

Choose from fashion plates, costumes illustrating design principles, trace and adapt to individual needs, work out in color.

10. Illustration of themes and figure drawing. Choose themes from History or English. See How Children Learn to Draw.

11. Keep sketch books throughout the year.

ART. IV.

Problems.

1. Outdoor sketching with charcoal in four values and in color. When weather does not permit, work inside on perspective, color, and principles of Composition.

2. Draw oblongs of good proportion and convert into designs for teapot, pitcher, bowl and optional problems. Work for balance, rhythm and symmetry. Use delineascope to stimulate ideas by showing how similar problems have been solved by artists.

3. Make a pattern to be incised on a piece of pottery.

4. Design a pair of copper book ends, a copper box with a pattern for etching. Make complete working drawings.

5. Make a design for a pendant involving stone setting and engraving.

6. Make a design for an enameled bar pin.

7. Make a design for reed work basket or a serving tray. Block print a design for base of tray.

8. Interior decoration, including review of Color and Perspective. Work out different views of interiors. Treat like other problems in design and composition and show that in order to secure unity and restfulness, the arrangement of furniture, placing of rugs and hanging of pictures must be in harmony with the structural lines of the room. (See Interior Decoration by Frank Alva Parsons.

9. Illustration of themes and figure drawing. Choose themes from History and English. This problem may be in the nature of a test of the four years' work in Drawing, Composition, Color and Design.

10. Keep sketch books throughout the year.

Note: Design and Drawing have been grouped together, twelve weeks' time being given to the two subjects. The instructor may introduce Drawing for the sole purpose of developing technique and facility in a given medium whenever it seems advisable.

Pottery.

A Four Year Course of Six Weeks Each Year.

AIMS.

To gain an understanding of the value of design in industrial and commercial products.

To develop individuality, coordination of hand and eye and appreciation of beauty as expressed in design and color in constructed forms.

To develop manual skill in plastic expression.

To gain an insight into one of the world's great industries, of both the present and past.

Outline of Course covering a period of twenty-four weeks, six weeks in each of the four years of the Art Course.

SUBJECT MATTER AND PROJECTS.

A body of knowledge about Pottery as an important world industry, and its development from early antiquity to the present, with experiments in the different methods and processes of construction and ornamentation. The work in design which necessarily precedes such a course, will be found outlined under the heading "Drawing and Design." See The Potter's Craft, by Binns, and The Industrial Arts in Elementary Education, by Winslow and Gompf.

ART. I.

Study of Clay.

Clay deposits; composition; qualities; preparation for commercial use; purifying; Rew Wing, Minnesota, clay. Building processes—hand building, throwing, on the potter's wheel, casting. Methods of glazing, pouring, dipping, and applying with the brush. Method of baking, stacking; the kiln; firing; measuring temperatures by means of pyrometric cones.

Study of Clay and Clay Products as a World Industry.

Earthware—the coarsest kind of pottery.

Stoneware—ordinary table ware.

Porcelain—made from Kaolin, highest quality of china dishes.

Model a paper-weight—animal form. May be a frog, turtle, beetle, etc.

Acquaintance with material and practice in handling; knowledge of possibilities and limitations; training in manual skill.

Build a tea-tile or fireplace tile.

The method of piece building. Application of incised design, the basis of all elementary problems in design applied to clay.

Building a candlestick with handle.

Use same method as building the tile, with addition of rim center and handle—the parts a structural part of the whole.

Building a flower-pot or jar for bulbs.

The method of coil building, in a straight sided, thick-walled piece of pottery. Addition of rim for strength and beauty. To be glazed on the outside only.

ART. II.

Study of Pottery Construction.

The potter's wheel; the plaster mould—two and three-piece moulds and pouring. Composition of plaster and of slip. Pressed pottery. Modern commercial methods. Visit Clyde Iron Works and observe methods of making moulds for casting iron.

History of American Indian Pottery: Hand Building.

Methods of work; coiling method; uses of pottery; methods of ornamentation; sources of design. Work of Chippewa Indians of Minnesota.

Building a low bowl.

Coil method of building; construction of curved sides; development of accuracy in following a definite pattern.

Building a small vase.

More advanced problem in coil building; greater test of accuracy in following definite design.

Building a bowl or vase with ornamental handles or feet.

Modeled ornament structural part of the pot. It may be a fern dish; bulb bowl; nut bowl; fruit bowl.

Building a jar or bowl with cover and some form of ornamentation.

Construction of parts that fit together. It may be a marmalade jar; rose bowl; pot pourri jar; ink well; butter crock; incense burner; jewel box; or ginger jar.

ART. III.

Study of Design Applied to Clay.

Space arrangements, incised design the basis of decoration in beginning pottery work. Modeled ornament; drip glazing; inlay matt; under glaze painting; over glaze painting, etc.

History of Pottery: The Potter's Wheel.

Egyptian and Greek Pottery. Uses; methods of construction; forms of decoration; value historically and aesthetically. (Make tracings of designs on Greek vases.)

Building sugar bowl and creamer set or pair of standing candlesticks.

Problem of building two pieces of the same size and shape at the same time.

Construction of three-piece plaster mould.

Cast pottery. Experiments with drip glazes.

Pottery design adapted from American Indian, Egyptian, or Greek, built and decorated in color.

ART. IV.

Study of Glazing.

Methods of glazing. Experiments in mixing to produce varieties of color effects.

History of Pottery.

Foreign potteries: China, Austria, England, Italy, France, Holland, and Germany. Sevres, Cantigalli, Dresden, Haviland, Wedgwood, Royal Doulton, Willow, Canton, etc.

American potteries: Rookwood, Cincinnati, Ohio; Newcombe, New Orleans, Louisiana; Grueby, Boston, Mass.; Van Briggle, Colorado Springs, Colorado; Moravian tiles, Doylestown, Pann.; Markham, Ann Arbor, Michigan.

Selection of the good and bad in commercial pottery from the down town shops.

1. Child's set of mug and plate, or bread-and-butter set of pitcher and bowl, ornamented with incised design and underglaze painting.

2. Teapot with pottery or wicker handle. Problem of addition of spout, and review of handle and cover problems.

3. Optional problem. Must include some form of enrichment or decoration.

Course in Metal and Jewelry.

Covers Four Years of Six Weeks Each.

AIMS.

To create a desire to choose, according to a higher standard of artistic value, the commercial products in jewelry and metal work through the appreciation of good design and technique.

To recognize and create an appropriate and suitable design for the material used.

Skill in the fundamental processes of sawing, filing, drilling, soldering, stone setting, polishing, riveting, turning, raising. Knowledge of the more difficult processes of chasing, engraving, and enameling.

ART. I.

SUBJECT MATTER AND PROJECTS.

History of metal work and the metal industry. Relation of design to the industry. (Show examples with delineascope.)

Names and uses of tools essential for the course, and names and meanings of terms such as alloy, anneal, oxidize, etc. Be able to make sketches of tools.

Processes.

Sawing, drilling, filing, sand papering, annealing, polishing, oxidizing.

a. Materials: Copper, brass, German silver.

b. Problems: book ends, letter holder, paper knife, or watch fob, etc.

Combination of processes learned in problems above.

a. Materials: Sterling and German silver, and copper.

b. Problems: bar pin, scarf pin, hat pin, or bracelet.

Soft soldering.

a. Materials: empty fruit or milk cans, and tin boxes; soft solder.

b. Problems: Make a sugar scoop, a cookie or doughnut cutter, a tin cup or other utensils useful for camping.

ART. II.

Work of first year prerequisite.

History of the metal and jewelry industries. Show examples of good design and craftsmanship with the delineascope. Relation of design to the industries; possibilities and limitations of material.

Processes.

Wire drawing—soldering.

a. Materials: Sterling silver and copper.

b. Problems: A long chain or a short watch chain, a bar pin involving saw piercing and use of balls or wire.

Stone setting.

a. Materials: Silver or copper.

b. Problems: A watch fob, a bar pin, cuff links, or inserts for long silver chain.

ART. III.

Work of first two years prerequisite.

History of the metal industry and craftsmen of the middle ages. Further knowledge of possibilities of design as applied to metal and jewelry.

Processes.

Review processes learned during first and second years.

Raising and planishing.

a. Materials: Copper, silver.

b. Problems: Tray, bowl, napkin clip, nut spoon, etc.

Stone setting, engraving with file.

a. Material: Silver.

b. Problems: Choose two of the following: Pin, pendant, cuff links, ring, hat pin, etc.

ART. IV.

Work of first three years prerequisite.

History of the metal and jewelry industries, including East Indian, European, and American craftsmen and designs.

Processes.

Etching.

a. Materials: Copper and silver.

b. Problems: Book ends, letter holder, copper box, tray, etc.

Engraving, enameling.

a. Materials: Silver and copper.

b. Problems: Choose two of the following: Pin, pendant, ring, bracelet, napkin clip, napkin ring.

COURSE IN ART APPRECIATION FOR JUNIORS AND SENIORS.

This course is open to Juniors and Seniors, one period each day, five days per week, for the entire year. No drawing or technical work is to be done. Typical examples of the works of art of all ages will be studied by means of prints and with the delineascope. These will be analyzed from the standpoint of guiding principles underlying all works of art. Since intelligent judgments can be formed only by an acquaintance with conditions, politically, religiously, morally, and scientifically, as much history will be studied as is necessary for such a background. A Short History of Art by De Forest and Caffin will be used as a text book and the rich and abundant material in the Public Library in the way of books and illustrative material to supplement the text.

AIMS.

To acquaint students with some of the enduring works of Art of all ages. This includes architecture, sculpture, painting, and industrial products.

To cultivate the ability to discriminate with justifiable reasons for choice.

To apply the principles of design to problems of every day life in selection, in construction, and in appreciation.

SUBJECT MATTER.

Typical examples of the prehistoric art of Greece, North America, Egypt and Peru.

Typical examples in architecture, painting, sculpture, and handicrafts of the art of Egypt, Assyria, Babylonia, Greece, Rome, Italy, Germany, France, Spain, England, China, Japan, India and America.

Primitive Art.

Architecture.

Mycenean and prehistoric Greek, e. g., The Lion Gate and Stonehenge. Houses of American and Mexican Indians and ancient Peruvians. Post and lintel and arch.

Sculpture.

Stone carving and engraving.

Totems.

Sphynxes of Egypt.

Painting.

Paintings of animals on walls of caves.

Articles for personal adornment.

Ornamentation of tools, utensils, and implements of warfare.

Handicrafts.

Pottery, including objects of utility and for religious and ceremonial uses. Found in ruins of all ancient civili-

zations, e. g., Greece, Central Asia, Egypt, France, Scandinavia, Peru, North America, etc.

Basketry, made of a variety of materials. Make a special study of those made by North American Indians.

Weaving.

Textile fabrics made on rude looms by North American Indians, Peruvians, Egyptians, etc.

A variety of ornaments, carved wooden objects, such as weapons, tools, implements, articles for personal adornment, such as charms, amulets, scarabs, etc.

Egyptian Art.

Architecture.

Outgrowth of religious beliefs.

Power and superiority expressed by size.

Tombs: different kinds. Study pyramid of Cheops as type.

Temples: Study Temple of Karnak as type. Columns, capitals, decorations and color.

Sculpture.

Sphynxes.

Statue of Rameses II, and The Scribe.

Small portrait statues of kings.

Bas reliefs on walls of temples, tombs and palaces.

Painting.

Decorative in character. Tomb of Perneb in Metropolitan Museum, New York.

Flat tones of color on dry plaster.

Fine feeling for pattern. Perspective ignored. Symbolism.

Handicrafts.

Weaving, use of linen for mummy cloths.

Pottery and clay modeling.

Metalry and jewelry.

Assyrian and Babylonian Art.

Architecture.

Temples—use of bricks.

Sculpture.

Bas reliefs of hunting scenes. (Make tracings.)

Painting.

Few examples.

Handicrafts.

Weaving and gem carvings.

Pottery, including glazed ware of great beauty, and enameled tiles.

COPPER AND BRASS
Designed and Made in the Art Department of the Central High School

Greek Art.

Architecture.

Temples.

Three Greek orders. (Make tracings for note books.) Examples of each. Parthenon, Temple of Jupiter, Temple of Wingless Victory.

Proportion . (Make tracings of parts of Parthenon.) Theatres.

Sculpture.

Statues of gods, goddesses and athletes. Compare work of Myron, Phidias, Praxiteles, and Scopas.

Temple reliefs: friezes and pediments.

Study frieze and pediments of Parthenon. Make tracings to illustrate rhythm of line in prancing horses, etc.

Votive offerings and religious images, and grave stele.

Painting.

Decoration of architecture and sculpture.

Vase painting. (Make tracings of different forms with their decorations.)

Mural painters:

Polygnotus, Zeuxis, Parrhasius.

Portrait painters:

Cleanthes, Appelles; portraits painted on mummy cases.

Handicrafts.

No distinction between fine and industrial art in Greece.

Pottery developed to high gree of perfection.

Gold, silver and bronze ornaments, glass vessels, engraved stones, gems, and coins.

Roman Art.

Architecture.

Not an organic unit like Greek architecture. Forms borrowed from conquered nations.

Temples: Pantheon.

Theatres: Colisseum.

Triumphal arches: arches of Titus and Constantine.

Aqueducts.

Public buildings, such as basilicas, baths, etc.

Sculpture.

Copies of Greek sculpture and portrait statues.

Painting.

Best examples, the mural paintings at Pompeii.

Handicrafts.

Mosaics and household utensils.

Early Italian Art.

Architecture.

The basilica or public meeting place. (Study form.) Romanesque: group of buildings at Pisa, consisting of Cathedral, Baptistry and Leaning Tower; and Cathedral of Mayence, Germany. Transition from Romanesque to Gothic.

Sculpture.

Nicolas Pisano: reliefs of pulpit of Baptistry at Pisa; fountain in market place at Perugia. (Compare with Greek sculpture.)

Painting.

Cimabue and Giotto of the Florentine School, Simone di Martino of the Siennese School. Rise of Franciscan and Dominican orders of monks. Influence of St. Francis of Assizi. Work of Giotto in Church of St. Francis at Assizi, in Arena Chapel at Padua and in churches of Florence. Followers of Giotto: Taddeo Gaddi, Orcagna and Fra Angelico.

Industrial Arts.

Glass painting and workers in gold, silver and bronze.

Gothic Art.

Ground plans same as Romanesque. Pointed arch, rib vaulting, flying buttresses, and use of nature forms in decoration, chief characteristics of Gothic architecture and sculpture. Attained its highest perfection in France. The following are the best examples. Study them as examples of the finest type of organic design and decoration.

France.

Rheims Cathedral—Rheims.
Notre Dame Cathedral—Paris.
Amiens Cathedral—Amiens.
Chartres Cathedral—Chartres.

Germany.

Cologne Cathedral—Cologne.

England.

Salisbury Cathedral—Salisbury.
Lincoln Cathedral—Lincoln.
Canterbury Cathedral—Canterbury.
Westminster Abbey—London.

Italy. More classic than Gothic.

Orvieto Cathedral—Orvieto.
Milan Cathedral—Milan.
Siena Cathedral—Siena.

Other Gothic Buildings.

Town halls, guild and trade halls; e. g., town hall of Louvain, Belgium.

Early Gothic Sculpture was subordinated to Architecture; the best examples are statues which form a part of the decorative scheme of Cathedrals like Rheims, Amiens, etc.

Renaissance and Modern Art. Outgrowth of many influences.

Architecture. Revival of the classic.

Duomo or Cathedral of Florence—Brunelleschi.
Florentine palaces.
St. Peter's Cathedral at Rome.
Venetian churches and palaces.
Palace of Fontainebleau in France.
The Louvre in Paris.
French chateaux.
Palace of Versailles.
St. Paul's Cathedral in London.

Sculpture.

Ghiberti—Bronze doors of Baptistry in Florence.

Donatello—St. George, Frieze of Child Angels and statue of Gattamelata in Padua.

Lucca della Robbia—Frieze of Singing Boys.

Verrocchio—Follower of Donatello. Colleoni Statue in Venice.

Sansovino and Benevenuto Cellini.

Michael Angelo—Statue of David in Florence; Statue of Moses in Rome; Monuments of the Medici family in Florence.

Schools of Nuremberg and Ulm in Germany represented by Veit Stoss, Adam Krafft, Albrecht Durer, Holbein, Peter Vischer, and others, who were also wood carvers.

In France, the work of Jean Goujon may be seen to advantage in the Louvre in Paris.

Later Renaissance sculptors, who tried to follow the example set by Michael Angelo, but whose work resulted in exaggerated forms and mannerisms are: John of Bologna, whose best known work is the bronze Mercury, Bernini, and Houdon, known for his portrait statue of Washington.

Painting.

Massaccio—greatest painter since Giotto. Excelled in draughtsmanship, composition, and dramatic feeling. A long list of distinguished Italian painters follow. Study with penny prints and with delineascope. Paolo Uccello, Fra Filippi Lippi, Botticelli, Benozzo Gozzoli, Pilippino Lippi, Ghirlandajo, the teacher of Michael Angelo, Signorelli Mantegna, Perugino, the teacher of Raphael and Correggio.

The Venetian School of painting strongly influenced by the Orient and characterized by color, light and shade, atmosphere and movement. Chief exponents were the Vivarini and Bellini families, Carpaccio, Giorgione and Titian. Italian Art reached its highest point in the sixteenth century, under the five following artists: Leonardo da Vinci, Raphael, Michael Angelo, Andrea del Sarto and Titian. Secure penny prints and study and compare the works of these artists.

This period, followed by one of decline, represented by Guido Reni, Carlo Dolci, and Sarvator Rosa.

Trace the evolution of painting, sculpture, and architecture in the following countries, noting characteristic styles of each and influences which brought them about.

Painting.

Spanish painters: Represented by Velasquez, Murillo, and the modern painters Sorolla and Zoloaga.

Flemish painters: Hubert and Jan van Eyck, the inventors of oil painting. Hans Memling, Teniers, Rubens and Van Dyck. (Read The Cloister and The Hearth, by Charles Reade.) Meunier best represents modern Belgium. (See recent magazines for illustrations of his work.

Dutch painters: Franz Hals, Nicholas Maes, Hobbema, Ruisdael, Paul Potter, Rembrandt, Israels, the Maris Brothers and Mauve. (See masterpieces in color.)

French painters: Claude Lorrain, Watteau, Chardin, David, Delacroix, Rosseau, Millet, Corot, Daubigny, Troyon, Courbet, Manet, Monet. (Consult back numbers of The Mentor.)

British painters: Hogarth, Sir Joshua Reynolds, Thomas Gainsborough, Constable, Morland, Turner, Alma Tadema, Rosetti, Burne Jones and William Morris.

German painters: Albrecht, Durer, Hans Holbein, Liebermann, Franz Stuck, Boecklin, a Swiss by birth, and Hans Thoma.

Architecture.

Greek revival—examples in England, Bank of England and British Museum; in Germany, public buildings of Berlin, Dresden, Munich; and the Parliament Houses of Vienna in Austria.

In France the tendency was toward Roman rather than Greek architecture until superseded by a revival of sixteenth century French Renaissance style. Typical examples are the Paris Opera House and the additions to the Louvre.

Gothic revival in England resulting in buildings like the Houses of Parliament in London.

Sculpture.

FIGURE DRAWING FOR ILLUSTRATION LOWELL'S "THE COURTIN'"

Classic revival of the eighteenth century, stimulated by Winckelmann.

Antonio Canova—Venetian.

Thorwaldsen—Danish.

Rauch—German.

Rietschel—German.

Flaxman—England.

John Henry Foley—Ireland.

The Nineteenth Century.

Characterized by naturalism. France leads other countries with such sculptors as David d'Angers, Barye, Chapu, Falgiere, Fremiet, and others, culminating in Rodin.

In England, Alfred Stevens, Thornycroft, Harry Bates, George Frampton, and others.

American Art.

Painting.

1. Early or revolutionary period; survival of British traditions ending with founding of National Academy of Design and the death of Stuart in 1828; representative artists, Smybert, Benjamin West, Peale, Copley, Trumbull, Stuart and Allston.
2. Middle period or beginning of indigenous growth, 1825-1870; "Hudson River School," best expression of this period; representative artists, Doughty, Cole, Durand, Church, Hill, Bierstadt, Moran, Gifford, McEntee, Harding, Elliot, Hicks, Page, Baker, Healy, Mount and Leutze.
3. Influence of the centennial exhibition of 1876 and organization of Society of American Artists in 1878; representative artists, Homer Martin, J. Appleton Brown, C. S. Reinhart, Thomas Hovenden, Robert W. Weir, George Inness, Winslow Homer and William Morris Hunt.
4. The present: landscape painters, Fuller, George Inness, Jr., Murphy, Foster, Tryon, Ranger, Hassam, Davis, Steele, Meakin, Ochtman and Browne. Mural painting: Liberal Arts building at the World's Fair, Simmons; Congressional Library, Washington, D. C., Blashfield, Alexander, Cox, Walker, Benson, Simmons, Reid, Vedder, Gari Melchers, Maynard, etc.; Boston Public Library, Edwin Abbey, Sargent and Elliot; artists represented in the Minnesota State Capitol and Appellate Courthouse, New York City. Other contemporary artists, Abbott Thayer, George de Forest Brush, Cecilia Beaux, Alexander Harrison, F. A. Briddman, James McNeil, Whistler, Maxfield Parrish, Howard Pyle and William M. Chase.

Sculpture.

1. Imitative sculptors, Hiram Powers, Greek Slave; Horatio Greenough, colossal statue of Washington; Clark Mills, Thomas Crawford and Randolph Rogers.
2. Good American sculpture begins with Thomas Ball, 1819; J. Q. A. Ward, and Olin L. Warner.
3. The present, St. Gaudens, Daniel French, Frederick MacMonnies, Paul Bartlett, George Barnard, Lorado Taft, E. C. Potter, Edwin Elwell, W. O. Partridge, Cyrus Dallin, the Borglum Brothers, etc.

Architecture.

1. Early colonial, Fairbanks house, Dedham, Mass., 1636.
2. More architectural character introduced after 1725; mansions of Virginia, New England houses in Newburyport, Portsmouth, Salem, Ipswich, Provincetown, etc.
3. Greek and Gothic revivals appear in America about 1830; Colonial traditions destroyed; period before and immediately after Civil war marked by bad taste.
4. The present, R. M. Hunt, Lenox Library, New York; country mansion of W. C. Vanderbilt, Asheville, N. C.; Tribune building, New York. H. H. Richardson, Trinity church and Brattle Square church, Boston; Marshall Field Building, Chicago, Law School, Harvard University. McKim, Meade and White, Boston Public Library, Buildings of Columbia University, etc.

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